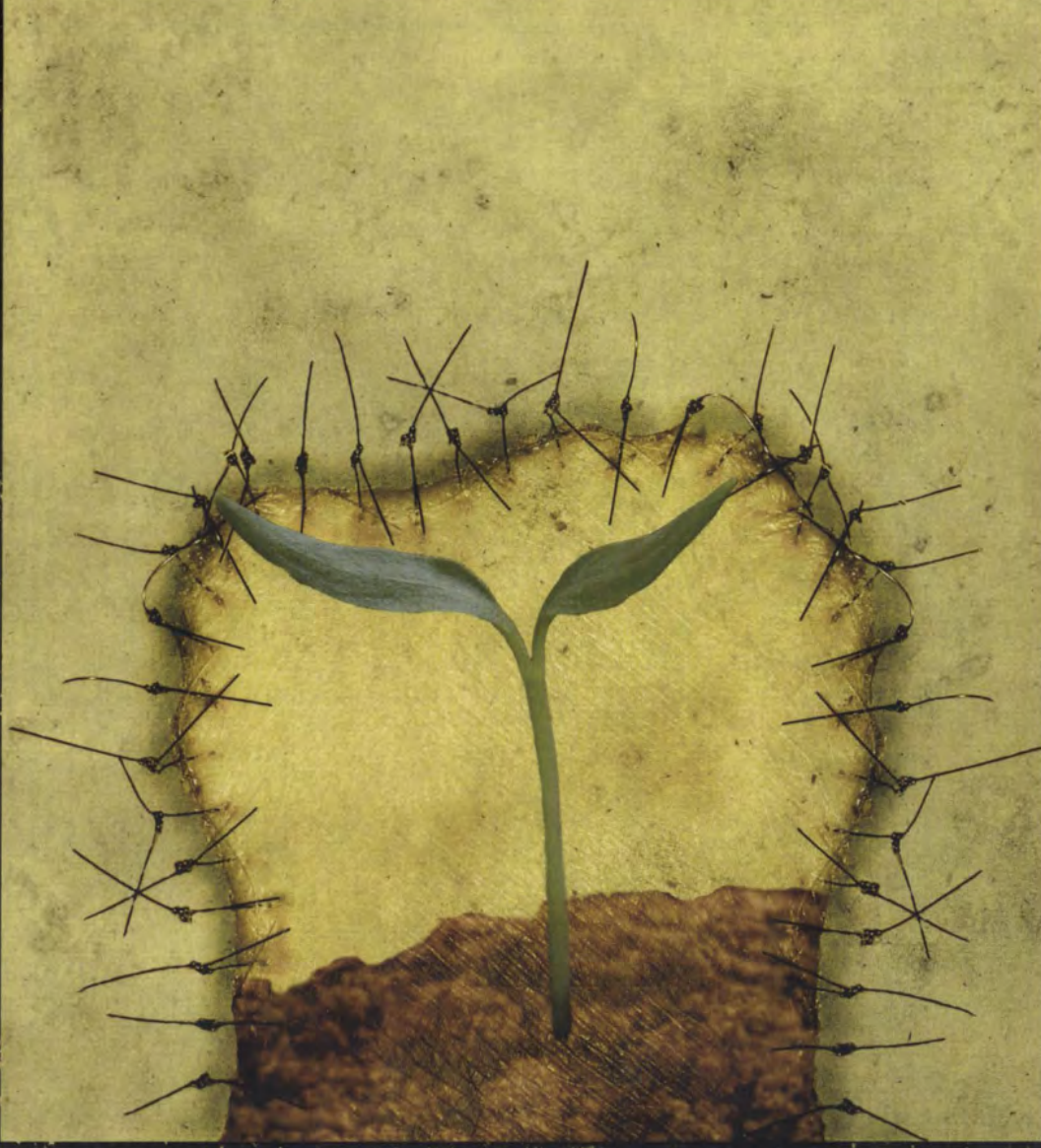

ORIGINS

A JOHN ZERZAN READER

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FC Press
Milwaukee, WI
www.fc666.com

Black and Green Press
Greensburg, PA
www.blackandgreenpress.org

Cover design and layout:
Inky Cap Design
www.inkycapdesigns.com

Printed in Canada.

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FC PRESS · BLACK AND GREEN PRESS

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PREFACE

I believe Kevin Tucker gave the perfect introduction to John Zerzan's works here, so I will just celebrate John and how his essays have changed my life.

John lays waste to our civilized mindset and our technological prison and truly gets to the heart of the death march that is civilization: questioning how we came to be in such an isolated and alienated place in this world that we once belonged to wholly, both physically and spiritually. He has brought up some absolutely integral questions to anarchism at times when no one else was asking them.

I got into John's work through a friend who played in a hardcore band with me. He suggested I read a few of his essays and it instantly made sense of the void I felt other writers hadn't touched upon. John got to the root of it all, and did it unflinchingly. He exposes the origins of civilization, the persevering aspects that comprise its alienating reach into our daily lives. The alienation we feel is rampant and ever deepening, and these essays really delve into the roots of why. They've helped me to understand the roots of the isolation I was feeling and still feel today, as someone who has known nothing but concrete and artifice, but has always longed for a deeper connection.

I now have the chance to help put out a collection of John's essays that demolish the foundations of this crisis called civilization and I couldn't be happier to be a part of making them available for people who may not have had the chance to read them before. These 'origins' essays make up a great introduction to anarcho-primitivist thought, and will hopefully make some important connections for people who have yet to encounter those critiques.

I'm looking forward to the party amongst the ashes of this beast. Fuck cities; fuck civilization.

Andy Hurley
FC Press

THE ORIGIN OF ORIGINS

This collection of John Zerzan's 'Origins' work is long overdue. Spanning over three decades, these works collectively question our very basic understanding of how it is we relate to the world.

The Origins in question are something deeply personal, something tied to the very nature of who we are and how we interact with each other and with the world around us. These essays stem from an anarchist's urge to engage the question of authority and authoritarianism to their deepest core. They're a spit in the face of the Left and Left leaning history of anarchist and radical thought because they slay the sacred cow, the unquestioned core of domesticated reality: civilization.

The search that John has taken is rooted in a certain time. That's not to say it's dated or merely a historically placed argument, but nonethe-less a significant time in radical thinking. Starting in the late 1970s through the 1980s to the present, these essays recognized the post-Cold War void of typical Leftist thought. Through the rise of feminism, ecology, fourth world movements and the soulless conquest of modernity; it became increasingly clear that there was more at stake than simply a question over the control of production and distribution of wealth. As technology continued to draw the world closer through the mediated sphere of consumerism, it became increasingly obvious that the myths of Progress had shown their true face. The Progress that workers had taken pride in, that colonizers expanded upon, that capitalists preached and socialists yearned for had decimated the Earth and with it, community.

Questions remained.

The Situationists had stumbled onto the edge of Modernity, had seen the fault in the dialectic laid out by Marx, but were unable to move beyond convention to see past the factories. The workers continued their orgy of production as the decentralization of industrialism left their hallowed hopes for worker's control in the dustbin of history.

Then came the ecologists, the cries for animal liberation, and the clenched fists against the racist, homophobic, patriarchal imperialism of the State. Individual and sometimes crossing sects of well meaning and much needed resistance movements spread through the social sciences and philosophy, questioning the paradigms of imperialist his-story.

What resulted wasn't so much a revision of history, but a retelling. The eyes of those slicing up the world began to open to see less of a reflection of their much-guarded order, but a world of egalitarian societies and threatened wildness, and a complex one at that.

As questions began to be answered, more questions opened.

Anthropology was perhaps one of the most impacted fields.

This new era of cultural anthropology came to fruition during the 1966 'Man the Hunter' conference where the idea of the hunter-gatherer societies as centered on the prowess of the 'strong hunter' was tossed aside. The vision that emerged, which many previous anthropologists had been unable to see, was that these societies were egalitarian; lacking any source of political power, gender inequality, these societies were anarchistic. Embodying a primal anarchy that emerged and existed without force, arising and continued by the nomadic flow of people living in what the classical anarchist Peter Kropotkin famously called "mutual aid".

Though this realization and distinction remains, to this day, largely in the hands of specialists, the implications are massive. The basis of the State, the most central justification for power, remains in the fear that human nature is evil. As civilized beings, we remain under the shade of our original sin and the consequential ejection from Eden. The plow is our penalty and this earthly realm is a testing ground for the source of hierarchy, as we know it: an almighty god.

What was unveiled during this time was neither the 'noble savages' of Rousseau nor the 'brutal savages' of Hobbes, but humans, living with nature, as we had evolved.

And the questions come pouring out.

You have the historian and social critic Lewis Mumford extrapolating the essence of power and its magnification through the Mega-Machine: the technological society comprised of human and non-human parts. You have the social ecologist Paul Shepard looking at the consequences of domestication for humans and our relations. The philosophers at the Frankfurt School in Germany looking further at the nature of communication and thought in regards to our interactions. You have ecologists like William Catton pointing at the fatal consequences of the energy crisis created by civilization and furthered by the industrial bubble. You have eco-feminists like Susan Griffin relating the domination of nature through agriculture with the patriarchal attempts to conquer women.

All of this was happening at once, and most radicals merely sought a continuation of Marxist, Maoist, and Leninist dogma grasping onto an anachronistic sense of freedom that is tied to the machine. All

the while, the reality was all too apparent that the socialist was no less the industrial dreamer than the capitalist. China and Russia decimated the environment in an attempt to match Western modernization and militarism as the bodies piled before them. Central and South America, Eastern Europe, and much of Africa became pawns for socialist revolutionaries with a moralistic sense of death for the sake of the sacred Revolution.

Bodies piled, the shackles remained.

For anyone who was paying attention, the Left had failed. The spirited rants of the revolutionaries left millions dead. Marxists retreated to universities where they could continue to pin the slaughter on an improper application of principle.

Thread by thread, the myth of Progress was exposing itself. Yet anarchists held steadfast to the blindsided vision of an industrial paradise and antiquated unions that would only become more and more powerless timepieces.

And out of this arose a small group of what has been called 'Post-Left' anarchists. Largely tied to the magazines Fifth Estate and Anarchy: a Journal of Desire Armed, the social and ecological reality of this turning tide had begun to set in. Alongside Fredy Perlman, John Moore, and John Connor, John Zerzan focused his work on the looming question: what does this entire sphere of new information mean for an anarchist critique? A simple rejection of the State was no longer appropriate. The impact of technology as a mediating force could no longer be ignored or savored. Neither could the tactics of the Left. The idea of a platform, ideology, and any other rigid basis for revolutionary thought and action remained in the gallows of Russia and Spain alongside the remains of once sympathetic anarchists. Lines were being drawn and erased.

And it is here that anarcho-primitivism was born.

Anarchism has never been short of factions and never will be. As unifying as a hatred of power might be, there are still plenty of variations for defining where that power originates and how it functions. Anarcho-primitivism is a critique; born of an era of questions where it was obvious there should never be a single vision or answer. In response, a critique stems from an understanding of where the source of power lies: the roots of civilization.

Civilization, defined as the culture of cities, is a large thing. Whereas civilizations really don't occur in human history until as recently as 7,000 years ago, it's impossible to view civilization as something that comes out of nowhere. And it is the question of where civilization begins that underlies this entire book. The nature of Origins has been at the heart of John's work alongside a scathing critique of technology and

modernity.

These essays strip down that question within an anthropological retelling of human history and told through a philosophical inquiry to the links between domesticated behaviors and wild, egalitarian ones.

It is that questioning that has pushed John's work to an uncomfortable position for anarchists. For many, it is held at arms length and misunderstood as dogma. But that's never been the purpose. As John has continually stated over the decades, this work is about the questions. Born of a continued retelling of human history, these essays are attempt to wedge anarchists from their ideological stances and failure to accept realities that stand contradictory to their sense of freedom and oppression.

But it takes a bit of discomfort to really develop thought and these questions have stood as some of the most important ones for anarchists or anyone seeking to understand the nature of authority and domination, disconnect and alienation. The knee jerk reactions to this line of inquiry speak to its importance. What could be closer to our very being than the domestication that creates and maintains our worldviews? How do you react when you realize that not only what you know, but also how you learned it is tied to the perpetuation of power? How does the Left ideologue react when they hear that civilization, the very basis of their liberatory ideals, is innately suicidal and omnicidal?

My own line of questions, based more in the anthropological and ecological realms, have led me through a sense of radical humility, an unlearning of the scientific reductionism, and given me a sense that the world I yearn for, a world that myself and every human has evolved for, still exists, and I don't need Revolution to recreate it for me. Removed from ideological restraints and a tradition of misguided hopes and dreams, the seemingly chaotic world of wildness and the fluid egalitarianism of nomadic gatherer-hunters are all welcoming.

Yet the journey is not easy and it may never be complete. That brings us back to this book, these essays, these questions, and the many discussions, in buildings and around fires that come from this. These essays are meant to be uneasy. Sometimes over-charismatic, over-simplifying, over-optimistic and overly pessimistic, these are questions. Some of the research has changed, some of the questions have been definitively answered, but, as I have said already, these essays were never meant to spur rigid ideology. They were born of changes, and they will always be based in a changing world and a constant movement towards liberation.

With all that said, the basis of the Origins work is built upon the understanding that civilization is the embodiment of a social structure based on a rigid division of labor, political and religious power, extreme

specialization and the domination of plants and animals. Technology is instrumental in its expansion and day-to-day existence. Domestication of humans is crucial to the prolonging of civilization alongside non-human animals and plants.

The search for Origins, as laid out here, takes us through the potential roots: the changes in human history that made domestication possible. The primary culprit here is symbolic thought. That is thought removed from direct experience, as typified in language, art, and ultimately embodied by writing and numbers. It is perhaps these areas that have been most contentious in John's writing as the archeology regarding language and art in our collective ancestory is extremely speculative, as well as with the origins of hunting and the forging of tools or weaving of cloth. But to write this off as a condemnation is as false as to claim language or art itself necessarily leads to an alienated perspective. The purpose is primarily to point out the means by which a domesticated reality could be spread, and language, as we have seen through the millenniums of colonization has always been a central to underlying a mediated worldview.

Agriculture, written history, colonization; these are all things with far less speculation. They are purely civilized phenomena and the products of proud fathers of Progress who catalogued them thoroughly. And this is the area where the Origins lead us to inevitably. But thanks to John's work here and his copious work beyond this realm, we have a stronger grounding for both the questioning and the action.

We are left with the purpose to ask more questions, to demand more, to see beyond the corpse of the Left and to lay waste to the grasp of the civilizer's upon our interactions. To reconnect with the world and the relationships that lay within it.

As the Situationists' put it decades ago, and John never fails to quote with his characteristic optimism: "Under the pavement, the beach!"

Only this time, we mean it literally.

For wildness and anarchy,
Kevin Tucker

FUTURE PRIMITIVE

Division of labor, which has had so much to do with bringing us to the present global crisis, works daily to prevent our understanding the origins of this horrendous present. Mary Lecron Foster (1990) surely errs on the side of understatement in allowing that anthropology is today "in danger of serious and damaging fragmentation." Shanks and Tilley (1987b) voice a rare, related challenge: "The point of archaeology is not merely to interpret the past but to change the manner in which the past is interpreted in the service of social reconstruction in the present." Of course, the social sciences themselves work against the breadth and depth of vision necessary to such a reconstruction. In terms of human origins and development, the array of splintered fields and sub-fields- anthropology, archaeology, paleontology, ethnology, paleobotany, ethnoanthropology, etc., etc. - mirrors the narrowing, crippling effect that civilization has embodied from its very beginning.

Nonetheless, the literature can provide highly useful assistance, if approached with an appropriate method and awareness and the desire to proceed past its limitations. In fact, the weakness of more or less orthodox modes of thinking can and does yield to the demands of an increasingly dissatisfied society. Unhappiness with contemporary life becomes distrust with the official lies that are told to legitimate that life, and a truer picture of human development emerges. Renunciation and subjugation in modern life have long been explained as necessary concomitants of "human nature." After all, our pre-civilized existence of deprivation, brutality, and ignorance made authority a benevolent gift that rescued us from savagery. "Cave man" and `Neanderthal' are still invoked to remind us where we would be without religion, government, and toil.

This ideological view of our past has been radically overturned in recent decades, through the work of academics like Richard Lee and Marshall Sahlins. A nearly complete reversal in anthropological orthodoxy has come about, with important implications. Now we can see that life before domestication/agriculture was in fact largely one of leisure, intimacy with nature, sensual wisdom, sexual equality, and health. This was our human nature, for a couple of million years, prior to enslavement by priests, kings, and bosses.

And lately another stunning revelation has appeared, a related one that deepens the first and may be telling us something equally important about who we were and what we might again become. The main line of attack against new descriptions of gatherer-hunter life has been, though often indirect or not explicitly stated, to characterize that life, condescendingly, as the most an evolving species could achieve at an early stage. Thus, the argument allows that there was a long period of apparent grace and pacific existence, but says that humans simply didn't have the mental capacity to leave simple ways behind in favor of complex social and technological achievement.

In another fundamental blow to civilization, we now learn that not only was human life once, and for so long, a state that did not know alienation or domination, but as the investigations since the '80s by archaeologists John Fowlett, Thomas Wynn, and others have shown, those humans possessed an intelligence at least equal to our own. At a stroke, as it were, the `ignorance' thesis is disposed of, and we contemplate where we came from in a new light.

To put the issue of mental capacity in context, it is useful to review the various (and again, ideologically loaded) interpretations of human origins and development. Robert Ardrey (1961, 1976) served up a bloodthirsty, macho version of prehistory, as have to slightly lesser degrees, Desmond Morris and Lionel Tiger. Similarly, Freud and Konrad Lorenz wrote of the innate depravity of the species, thereby providing their contributions to hierarchy and power in the present.

Fortunately, a far more plausible outlook has emerged, one that corresponds to the overall version of Paleolithic life in general. Food sharing has for some time been considered an integral part of earliest human society (e.g. Washburn and DeVore, 1961). Jane Goodall (1971) and Richard Leakey (1978), among others, have con- cluded that it was the key element in establishing our uniquely Homo development at least as early as 2 million years ago. This emphasis, carried forward since the early '70s by Linton, Zihlman, Tanner, and Isaac, has become ascendant. One of the telling arguments in favor of the cooperation thesis, as against that of generalized violence and male domination, involves a diminishing, during early evolution, of the difference in size and strength between males and females. Sexual dimorphism, as it is called, was originally very pronounced, including such features as prominent canines or "fighting teeth" in males and much smaller canines for the female. The disappearance of large male canines strongly suggests that the female of the species exercised a selection for sociable, sharing males. Most apes today have significantly longer and larger canines, male to female, in the absence of this female choice capacity (Zihlman 1981, Tanner 1981).

Division of labor between the sexes is another key area in human beginnings, a condition once simply taken for granted and expressed by the term hunter-gatherer. Now it is widely accepted that gathering of plant foods, once thought to be the exclusive domain of women and of secondary importance to hunting by males, constituted the main food source (Johansen and Shreeve 1989). Since females were not significantly dependent on males for food (Hamilton 1984), it seems likely that rather than division of labor, flexibility and joint activity would have been central (Bender 1989). As Zihlman (1981) points out, an overall behavioral flexibility may have been the primary ingredient in early human existence. Joan Gero (1991) has demonstrated that stone tools were as likely to have been made by women as by men, and indeed Poirier (1987) reminds us that there is "no archaeological evidence supporting the contention that early humans exhibited a sexual division of labor." It is unlikely that food collecting involved much, if any division of labor (Slocum 1975) and probably that sexual specialization came quite late in human evolution (Zihlman 1981, Crader and Isaac 1981).

So if the adaptation that began our species centered on gathering, when did hunting come in? Binford (1984) has argued that there is no indication of use of animal products (i.e. evidence of butchery practices) until the appearance, relatively quite recent, of anatomically modern humans. Electron microscope studies of fossil teeth found in East Africa (Walker 1984) suggest a diet composed primarily of fruit, while a similar examination of stone tools from a 1.5 million-year-old site at Koobi Fora in Kenya (Keeley and Toth 1981) shows that they were used on plant materials. The small amount of meat in the early Paleolithic diet was probably scavenged, rather than hunted (Ehrenberg 1989b).

The `natural' condition of the species was evidently a diet made up largely of vegetables rich in fiber, as opposed to the modern high fat and animal protein diet with its attendant chronic disorders (Mendeloff 1977). Though our early forbears employed their "detailed knowledge of the environment and cognitive mapping" (Zihlman 1981) in the service of a plant-gathering subsistence, the archaeological evidence for hunting appears to slowly increase with time (Hodder 1991).

Much evidence, however, has overturned assumptions as to widespread prehistoric hunting. Collections of bones seen earlier as evidence of large kills of mammals, for example, have turned out to be, upon closer examination, the results of movement by flowing water or caches by animals. Lewis Binford's "Were There Elephant Hunters at Tooralba?" (1989) is a good instance of such a closer look, in which he doubts there was significant hunting until 200,000 years ago or sooner. Adrienne Zihlman (1981) has concluded that "hunting arose relatively late in evolution," and "may not extend beyond the last one hundred

thousand years." And there are many (e.g. Straus 1986, Trinkhaus 1986) who do not see evidence for serious hunting of large mammals until even later, viz. the later Upper Paleolithic, just before the emergence of agriculture.

The oldest known surviving artifacts are stone tools from Hadar in eastern Africa. With more refined dating methods, they may prove to be 3.1 million years old (Klein 1989). Perhaps the main reason these may be classified as representing human effort is that they involve the crafting of one tool by using another, a uniquely human attribute so far as we know. Homo habilis, or "handy man," designates what has been thought of as the first known human species, its name reflecting association with the earliest stone tools (Coppens 1989). Basic wooden and bone implements, though more perishable and thus scantily represented in the archaeological record, were also used by Homo habilis as part of a "remarkably simple and effective" adaptation in Africa and Asia (Fagan 1990). Our ancestors at this stage had smaller brains and bodies than we do, but Poirier (1987) notes that "their postcranial anatomy was rather like modern humans," and Holloway (1972, 1974) allows that his studies of cranial endocasts from this period indicate a bascally modern brain organization. Similarly, tools older than 2 mil- lion years have been found to exhibit a consistent right-handed orientation in the ways stone has been flaked off in their formation. Right-handedness as a tendency is correlated in moderns with such distinctly human features as pronounced lateralization of the brain and marked functional separation of the cerebral hemispheres (Holloway 1981a). Klein (1989) concludes that "basic human cognitive and communicational abilities are almost certainly implied."

Homo erectus is the other main predecessor to Homo sapiens, according to longstanding usage, appearing about 1.75 million years ago as humans moved out of forests into drier, more open African grasslands. Although brain size alone does not necessarily correlate with mental capacity, the cranial capacity of Homo erectus overlaps with that of moderns such that this species "must have been capable of many of the same behaviors" (Ciochon, Olsen and Tames 1990). As Johanson and Edey (1981) put it, "If the largest-brained erectus were to be rated against the smallest-brained sapiens - all their other characteristics ignored - their species names would have to be reversed." Homo Neanderthalus, which immediately preceded us, possessed brains somewhat larger than our own (Delson 1985, Holloway 1985, Donald 1991). Though of course the much-maligned Neanderthal has been pictured as a primitive, brutish creature - in keeping with the prevailing Hobbesian ideology - despite manifest intelligence as well as enormous physical strength (Shreeve 1991).

Recently, however, the whole species framework has become a doubtful proposition (Day 1987, Rightmire 1990). Attention has been drawn to the fact that fossil specimens from various Homo species "all show intermediate morphological traits," leading to suspicion of an arbitrary division of humanity into separate taxa (Gingerich 1979, Tobias 1982). Fagan (1989), for example, tells us that "it is very hard to draw a clear taxonomic boundary between Homo erectus and archaic Homo sapiens on the one hand, and between archaic and anatomically modern Homo sapiens on the other." Likewise, Foley (1989): "the anatomical distinctions between Homo erectus and Homo sapiens are not great." Jelinek (1978) flatly declares that "there is no good reason, anatomical or cultural" for separating erectus and sapiens into two species, and has concluded (1980a) that people from at least the Middle Paleolithic onward "may be viewed as Homo sapiens" (as does Hublin 1986). The tremendous upward revision of early intelligence, discussed below, must be seen as connected to the present confusion over species, as the once-prevailing overall evolutionary model gives way.

But the controversy over species categorization is only interesting in the context of how our earliest forbears lived. Despite the minimal nature of what could be expected to survive so many millennia, we can glimpse some of the texture of that life, with its often elegant, pre-division of labor approaches. The "tool kit" from the Olduvai Gorge area made famous by the Leakeys contains "at least six clearly recognizable tool types" dating from about 1.7 million years ago (M. Leakey, 1978). There soon appeared the Acheulian handaxe, with its symmetrical beauty, in use for about a million years. Teardrop-shaped, and possessed of a remarkable balance, it exudes grace and utility from an era much prior to sym- bolization. Isaac (1986) noted that "the basic needs for sharp edges that humans have can be met from the varied range of forms generated from `Oldowan' patterns of stone flaking," wondering how it came to be thought that "more complex equals better adapted." In this distant early time, according to cut-marks found on surviving bones, humans were using scavenged animal sinews and skins for such things as cord, bags, and rugs (Gowlett 1984). Further evidence suggests furs for cave wall coverings and seats, and seaweed beds for sleeping (Butzer 1970).

The use of fire goes back almost 2 million years (Kempe 1988) and might have appeared even earlier but for the tropical conditions of humanity's original African homeland, as Poirier (1987) implies. Perfected fire-making included the firing of caves to eliminate insects and heated pebble floors (Perles 1975, Lumley 1976), amenities that show up very early in the Paleolithic.

As John Gowlett (1986) notes, there are still some archaeologists

who consider anything earlier than Homo sapiens, a mere 30,000 years ago, as greatly more primitive than we "fully human" types. But along with the documentation, referred to above, of fundamentally `modern' brain anatomy even in early humans, this minority must now contend with recent work depicting complete human intelligence as present virtually with the birth of the Homo species. Thomas Wynn (1985) judged manufacture of the Acheulian handaxe to have required "a stage of intelligence that is typical of fully modern adults." Gowlett, like Wynn, examines the required "operational thinking" involved in the right hammer, the right force and the right striking angle, in an ordered sequence and with flexibility needed for modifying the procedure. He contends that manipulation, concentration, visualization of form in three dimensions, and planning were needed, and that these requirements "were the common property of early human beings as much as two million years ago, and this," he adds, "is hard knowledge, not speculation."

During the vast time-span of the Paleolithic, there were remarkably few changes in technology (Rolland 1990). Innovation, "over 2 1/2 million years measured in stone tool development was practically nil," according to Gerhard Kraus (1990). Seen in the light of what we now know of prehistoric intelligence, such `stagnation' is especially vexing to many social scientists. "It is difficult to comprehend such slow development," in the judgment of Wymer (1989). It strikes me as very plausible that intelligence, informed by the success and satisfaction of a gatherer-hunter existence, is the very reason for the pronounced absence of `progress'. Division of labor, domestication, symbolic culture--these were evidently refused until very recently.

Contemporary thought, in its postmodern incarnation, would like to rule out the reality of a divide between nature and culture; given the abilities present among people before civilization, however, it may be more accurate to say that basically, they long chose nature over culture. It is also popular to see almost every human act or object as symbolic (e.g. Botscharow 1989), a position which is, generally speaking, part of the denial of a nature versus culture distinction. But it is culture as the manipulation of basic symbolic forms that is involved here. It also seems clear that reified time, language (written, certainly, and probably spoken language for all or most of this period), number, and art had no place, despite an intelligence fully capable of them.

I would like to interject, in passing, my agreement with Goldschmidt (1990) that "the hidden dimension in the construction of the symbolic world is time." And as Norman O. Brown put it, "life not repressed is not in historical time," which I take as a reminder that time as a materiality is not inherent in reality, but a cultural imposition, perhaps the first

cultural imposition, on it. As this elemental dimension of symbolic culture progresses, so does, by equal steps, alienation from the natural.

Cohen (1974) has discussed symbols as "essential for the development and maintenance of social order." Which implies--as does, more forcefully, a great deal of positive evidence--that before the emergence of symbols there was no condition of dis-order requiring them. In a similar vein, Levi-Strauss (1953) pointed out that "mythical thought always progresses from the awareness of oppositions toward their resolution." So whence the absence of order, the conflicts or "oppositions?" The literature on the Paleolithic contains almost nothing that deals with this essential question, among thousands of monographs on specific features. A reasonable hypothesis, in my opinion, is that division of labor, unnoticed because of its glacially slow pace, and not sufficiently understood because of its newness, began to cause small fissures in the human community and unhealthy practices vis-a-vis nature. In the later Upper Paleolithic, "15,000 years ago, we begin to observe specialized collection of plants in the Middle East, and specialized hunting," observed Gowlett (1984). The sudden appearance of symbolic activities (e.g. ritual and art) in the Upper Paleolithic has definitely seemed to archaeologists one of prehistory's "big surprises" (Binford 1972b), given the absence of such behaviors in the Middle Paleolithic (Foster 1990, Kozlowski 1990). But signs of division of labor and specialization were making their presence felt as a breakdown of wholeness and natural order, a lack that needed redressing. What is surprising is that this transition to civilization can still be seen as benign. Foster (1990) seems to celebrate it by concluding that the "symbolic mode...has proved extraordinarily adaptive, else why has Homo sapiens become material master of the world?" He is certainly correct, as he is to recognize "the manipulation of symbols [to be] the very stuff of culture," but he appears oblivious to the fact that this successful adaptation has brought alienation and destruction of nature along to their present horrifying prominence.

It is reasonable to assume that the symbolic world originated in the formulation of language, which somehow appeared from a "matrix of extensive nonverbal communication" (Tanner and Zihlman 1976) and face-to-face contact. There is no agreement as to when language began, but no evidence exists of speech before the cultural `explosion' of the later Upper Paleolithic (Dibble 1984, 1989). It seems to have acted as an "inhibiting agent," a way of bringing life under "greater control" (Mumford 1972), stemming the flood of images and sensations to which the pre-modern individual was open. In this sense it would have likely marked an early turning away from a life of openness and communion with nature, toward one more oriented to the overlordship

and domestication that followed symbolic culture's inauguration. It is probably a mistake, by the way, to assume that thought is advanced (if there were such a thing as `neutral' thought, whose advance could be universally appreciat- ed) because we actually think in language; there is no conclusive evidence that we must do so (Allport 1983). There are many cases (Lecours and Joanette 1980, Levine et al. 1982), involving stroke and like impairments, of patients who have lost speech, including the ability to talk silently to themselves, who were fully capable of coherent thought of all kinds. These data strongly suggest that "human intellectual skill is uniquely powerful, even in the absence of language" (Donald 1991).

In terms of symbolization in action, Goldschmidt (1990) seems correct in judging that "the Upper Paleolithic invention of ritual may well have been the keystone in the structure of culture that gave it its great impetus for expansion." Ritual has played a number of pivotal roles in what Hodder (1990) termed "the relentless unfolding of symbolic and social structures" accompanying the arrival of cultural mediation. It was as a means of achieving and consolidating social cohesion that ritual was essential (Johnson 1982, Conkey 1985); totemic rituals, for example, reinforce clan unity.

The start of an appreciation of domestication, or taming of nature, is seen in a cultural ordering of the wild, through ritual. Evidently, the female as a cultural category, viz. seen as wild or dangerous, dates from this period. The ritual "Venus" figurines appear as of 25,000 years ago, and seem to be an example of earliest symbolic likeness of women for the purpose of representation and control (Hodder 1990). Even more concretely, subjugation of the wild occurs at this time in the first systematic hunting of large mammals; ritual was an integral part of this activity (Hammond 1974, Frison 1986).

Ritual, as shamanic practice, may also be considered as a regression from that state in which all shared a consciousness we would now classify as extrasensory (Leonard 1972). When specialists alone claim access to such perceptual heights as may have once been communal, further backward moves in division of labor are facilitated or enhanced. The way back to bliss through ritual is a virtually universal mythic theme, promising the dissolution of measurable time, among other joys. This theme of ritual points to an absence that it falsely claims to fill, as does symbolic culture in general.

Ritual as a means of organizing emotions, a method of cultural direction and restraint, introduces art, a facet of ritual expressiveness (Bender 1989). "There can be little doubt," to Gans (1985), "that the various forms of secular art derive originally from ritual." We can detect the beginning of an unease, a feeling that an earlier, direct authenticity

is departing. La Barre (1972), I believe, is correct in judging that "art and religion alike arise from unsatisfied desire." At first, more abstractly as language, then more purposively as ritual and art, culture steps in to deal artificially with spiritual and social anxiety.

Ritual and magic must have dominated early (Upper Paleolithic) art and were probably essential, along with an increasing division of labor, for the coordination and direction of community (Wymer 1981). Similarly, Pfeiffer (1982) has depicted the famous Upper Paleolithic European cave paintings as the original form of initiating youth into now complex social systems; as necessary for order and discipline (see also Gamble 1982, Jochim 1983). And art may have contributed to the control of nature, as part of development of the earliest territorialism, for example (Straus 1990).

The emergence of symbolic culture, with its inherent will to manipulate and control, soon opened the door to domestication of nature. After two million years of human life within the bounds of nature, in balance with other wild species, agriculture changed our lifestyle, our way of adapting, in an unprecedented way. Never before has such a radical change occurred in a species so utterly and so swiftly (Pfeiffer 1977). Self-domestication through language, ritual, and art inspired the taming of plants and animals that followed. Appearing only 10,000 years ago, farming quickly triumphed; for control, by its very nature, invites intensification. Once the will to production broke through, it became more productive the more efficiently it was exercised, and hence more ascendant and adaptive.

Agriculture enables greatly increased division of labor, establishes the material foundations of social hierarchy, and initiates environmental destruction. Priests, kings, drudgery, sexual inequality, warfare are a few of its fairly immediate specific consequences (Ehrenberg 1986b, Wymer 1981, Festinger 1983). Whereas Paleolithic peoples enjoyed a highly varied diet, using several thousand species of plants for food, with farming these sources were vastly reduced (White 1959, Gouldie 1986).

Given the intelligence and the very great practical knowledge of Stone Age humanity, the question has often been asked, "Why didn't agriculture begin, at say, 1,000,000 B.C. rather than about 8,000 B.C.?" I have provided a brief answer in terms of slowly accelerating alienation in the form of division of labor and symbolization, but given how negative the results were, it is still a bewildering phenomenon. Thus, as Binford (1968) put it, "The question to be asked is not why agriculture...was not developed everywhere, but why it was developed at all." The end of gatherer-hunter life brought a decline in size, stature, and skeletal robusticity (Cohen and Armelagos 1981, Harris and Ross 1981), and introduced tooth decay, nutritional deficiencies, and most

infectious diseases (Larsen 1982, Buikstra 1976a, Cohen 1981). "Taken as a whole...an overall decline in the quality--and probably the length--of human life," concluded Cohen and Armelagos (1981).

Another outcome was the invention of number, unnecessary before the ownership of crops, animals, and land that is one of agriculture's hallmarks. The development of number further impelled the urge to treat nature as something to be dominated. Writing was also required by domestication, for the earliest business transactions and political administration (Larsen 1988). Levi-Strauss has argued persuasively that the primary function of written communication was to facilitate exploitation and subjugation (1955); cities and empires, for example, would be impossible without it. Here we see clearly the joining of the logic of symbolization and the growth of capital.

Conformity, repetition, and regularity were the keys to civilization upon its triumph, replacing the spontaneity, enchantment, and discovery of the pre-agricultural human state that survived so very long. Clark (1979) cites a gatherer-hunter "amplitude of leisure," deciding "it was this and the pleasurable way of life that went with it, rather than penury and a day-long grind, that explains why social life remained so static." One of the most enduring and widespread myths is that there was once a Golden Age, characterized by peace and innocence, and that something happened to destroy this idyll and consign us to misery and suffering. Eden, or whatever name it goes by, was the home of our primeval forager ancestors, and expresses the yearning of disillusioned tillers of the soil for a lost life of freedom and relative ease.

The once rich environs people inhabited prior to domestication and agriculture are now virtually nonexistent. For the few remaining foragers there exist only the most marginal lands, those isolated places as yet unwanted by agriculture. And surviving gatherer-hunters, who have somehow managed to evade civilization's tremendous pressures to turn them into slaves (i.e. farmers, political subjects, wage laborers), have all been influenced by contact with outside peoples (Lee 1976, Mithen 1990).

Duffy (1984) points out that the present day gatherer-hunters he studied, the Mbuti Pygmies of central Africa, have been acculturated by surrounding villager-agriculturalists for hundreds of years, and to some extent, by generations of contact with government authorities and missionaries. And yet it seems that an impulse toward authentic life can survive down through the ages: "Try to imagine," he counsels, "a way of life where land, shelter, and food are free, and where there are no leaders, bosses, politics, organized crime, taxes, or laws. Add to this the benefits of being part of a society where everything is shared, where there are no rich people and no poor people, and where happiness does

not mean the accumulation of material possessions." The Mbuti have never domesticated animals or planted crops.

Among the members of non-agriculturalist bands resides a highly sane combination of little work and material abundance. Bodley (1976) discovered that the San (aka Bushmen) of the harsh Kalahari Desert of southern Africa work fewer hours, and fewer of their number work, than do the neighboring cultivators. In times of drought, moreover, it has been the San to whom the farmers have turned for their survival (Lee 1968). They spend "strikingly little time laboring and much time at rest and leisure," according to Tanaka (1980), while others (e.g. Marshall 1976, Guenther 1976) have commented on San vitality and freedom compared with sedentary farmers, their relatively secure and easygoing life.

Flood (1983) noted that to Australian aborigines "the labour involved in tilling and planting outweighed the possible advantages." Speaking more generally, Tanaka (1976) has pointed to the abundant and stable plant foods in the society of early humanity, just as "they exist in every modern gatherer society." Likewise, Festinger (1983) referred to Paleolithic access to "considerable food without a great deal of effort," adding that "contemporary groups that still live on hunting and gathering do very well, even though they have been pushed into very marginal habitats."

As Hole and Flannery (1963) summarized: "No group on earth has more leisure time than hunters and gatherers, who spend it primarily on games, conversation and relaxing." They have much more free time, adds Binford (1968), "than do modern industrial or farm workers, or even professors of archaeology."

The non-domesticated know that, as Vaneigem (1975) put it, only the present can be total. This by itself means that they live life with incomparably greater immediacy, density and passion than we do. It has been said that some revolutionary days are worth centuries; until then "We look before and after," as Shelley wrote, "And sigh for what is not...."

The Mbuti believe (Turnbull 1976) that "by a correct fulfillment of the present, the past and the future will take care of themselves." Primitive peoples do not live through memories, and generally have no interest in birthdays or measuring their ages (Cipriani 1966). As for the future, they have little desire to control what does not yet exist, just as they have little desire to control nature. Their moment-by-moment joining with the flux and flow of the natural world does not preclude an awareness of the seasons, but this does not constitute an alienated time consciousness that robs them of the present.

Though contemporary gatherer-hunters eat more meat than their pre-historic forbears, vegetable foods still constitute the mainstay of

their diet in tropical and subtropical regions (Lee 1968a, Yellen and Lee 1976). Both the Kalahari San and the Hazda of East Africa, where game is more abundant than in the Kalahari, rely on gathering for 80 percent of their sustenance (Tanaka 1980). The !Kung branch of the San search for more than a hundred different kinds of plants (Thomas 1968) and exhibit no nutritional deficiency (Truswell and Hansen 1976). This is similar to the healthful, varied diet of Australian foragers (Fisher 1982, Flood 1983). The overall diet of gatherers is better than that of cultivators, starvation is very rare, and their health status generally superior, with much less chronic disease (Lee and Devore 1968a, Ackerman 1990).

Lauren van der Post (1958) expressed wonder at the exuberant San laugh, which rises "sheer from the stomach, a laugh you never hear among civilized people." He found this emblematic of a great vigor and clarity of senses that yet manages to withstand and elude the onslaught of civilization. Truswell and Hansen (1976) may have encountered it in the person of a San who had survived an unarmed fight with a leopard; although injured, he had killed the animal with his bare hands.

The Andaman Islanders, west of Thailand, have no leaders, no idea of symbolic representation, and no domesticated animals. There is also an absence of aggression, violence, and disease; wounds heal surprisingly quickly, and their sight and hearing are particularly acute. They are said to have declined since European intrusion in the mid-19th century, but exhibit other such remarkable physical traits as a natural immunity to malaria, skin with sufficient elasticity to rule out post-childbirth stretch marks and the wrinkling we associate with ageing, and an `unbelievable' strength of teeth: Cipriani (1966) reported seeing children of 10 to 15 years crush nails with them. He also testified to the Andamese practice of collecting honey with no protective clothing at all; "yet they are never stung, and watching them one felt in the presence of some age-old mystery, lost by the civilized world."

DeVries (1952) has cited a wide range of contrasts by which the superior health of gatherer-hunters can be established, including an absence of degenerative diseases and mental disabilities, and childbirth without difficulty or pain. He also points out that this begins to erode from the moment of contact with civilization.

Relatedly, there is a great deal of evidence not only for physical and emotional vigor among primitives but also concerning their heightened sensory abilities. Darwin described people at the southernmost tip of South America who went about almost naked in frigid conditions, while Peasley (1983) observed Aborigines who were renowned for their ability to live through bitterly cold desert nights "without any form of clothing." Levi-Strauss (1979) was astounded to learn of a particular

[South American] tribe which was able to "see the planet Venus in full daylight," a feat comparable to that of the North African Dogon who consider Sirius B the most important star; somehow aware, without instruments, of a star that can only be found with the most powerful of telescopes (Temple 1976). In this vein, Boyden (1970) recounted the Bushman ability to see four of the moons of Jupiter with the naked eye.

In The Harmless People (1959), Marshall told how one Bushman walked unerringly to a spot in a vast plain, "with no bush or tree to mark place," and pointed out a blade of grass with an almost invisible filament of vine around it. He had encountered it months before in the rainy season when it was green. Now, in parched weather, he dug there to expose a succulent root and quenched his thirst. Also in the Kalahari Desert, van der Post (1958) meditated upon San/Bushman communion with nature, a level of experience that "could almost be called mystical. For instance, they seemed to know what it actually felt like to be an elephant, a lion, an antelope, a steenbuck, a lizard, a striped mouse, mantis, baobab tree, yellow-crested cobra or starry-eyed amaryllis, to mention only a few of the brilliant multitudes through which they moved." It seems almost pedestrian to add that gatherer-hunters have often been remarked to possess tracking skills that virtually defy rational explanation (e.g. Lee 1979).

Rohrlich-Leavitt (1976) noted, "The data show that gatherer-hunters are generally nonterritorial and bilocal; reject group aggression and competition; share their resources freely; value egalitarianism and personal autonomy in the context of group cooperation; and are indulgent and loving with children." Dozens of studies stress communal sharing and egalitarianism as perhaps the defining traits of such groups (e.g. Marshall 1961 and 1976, Sahlins 1968, Pilbeam 1972, Damas 1972, Diamond 1974, Lafitau 1974, Tanaka 1976 and 1980, Wiessner 1977, Morris 1982, Riches 1982, Smith 1988, Mithen 1990). Lee (1982) referred to the "universality among foragers" of sharing, while Marshall's classic 1961 work spoke of the "ethic of generosity and humility" informing a "strongly egalitarian" gatherer-hunter orientation. Tanaka provides a typical example: "The most admired character trait is generosity, and the most despised and disliked are stinginess and selfishness."

Baer (1986) listed "egalitarianism, democracy, personalism, individuation, nurturance" as key virtues of the non-civilized, and Lee (1988) cited "an absolute aversion to rank distinctions" among "simple foraging peoples around the world." Leacock and Lee (1982) specified that "any assumption of authority" within the group "leads to ridicule or anger among the !Kung, as has been recorded for the Mbuti (Turnbull 1962), the Hazda (Woodburn 1980) and the Montagnais-Naskapi

(Thwaites 1906), among others."

"Not even the father of an extended family can tell his sons and daughters what to do. Most people appear to operate on their own internal schedules," reported Lee (1972) of the !Kung of Botswana. Ingold (1987) judged that "in most hunting and gathering societies, a supreme value is placed upon the principle of individual autonomy," similar to Wilson's finding (1988) of "an ethic of independence" that is "common to the focused open societies." The esteemed field anthropologist Radin (1953) went so far as to say: "Free scope is allowed for every conceivable kind of personality outlet or expression in primitive society. No moral judgment is passed on any aspect of human personality as such."

Turnbull (1976) looked on the structure of Mbuti social life as "an apparent vacuum, a lack of internal system that is almost anarchical." According to Duffy (1984), "the Mbuti are naturally acephalous - they do not have leaders or rulers, and decisions concerning the band are made by consensus." There is an enormous qualitative difference between foragers and farmers in this regard, as in so many others. For instance, agricultural Bantu tribes (e.g. the Saga) surround the San, and are organized by kingship, hierarchy and work; the San exhibit egalitarianism, autonomy, and sharing. Domestication is the principle which accounts for this drastic distinction.

Domination within a society is not unrelated to domination of nature. In gatherer-hunter societies, on the other hand, no strict hierarchy exists between the human and the non-human species (Noske 1989), and relations among foragers are likewise non-hierarchical. The non-domesticated typically view the animals they hunt as equals; this essentially egalitarian relationship is ended by the advent of domestication.

When progressive estrangement from nature became outright social control (agriculture), more than just social attitudes changed. Descriptions by sailors and explorers who arrived in "newly discovered" regions tell how wild mammals and birds originally showed no fear at all of the human invaders (Brock 1981). A few contemporary gatherers practiced no hunting before outside contact, but while the majority certainly do hunt, "it is not normally an aggressive act" (Rohrlich-Leavitt 1976). Turnbull (1965) observed Mbuti hunting as quite without any aggressive spirit, even carried out with a sort of regret. Hewitt (1986) reported a sympathy bond between hunter and hunted among the Xan Bushmen he encountered in the 19th century.

As regards violence among gatherer-hunters, Lee (1988) found that "the !Kung hate fighting, and think anybody who fought would be stupid." The Mbuti, by Duffy's account (1984), "look on any form of

violence between one person and another with great abhorrence and distaste, and never represent it in their dancing or playacting." Homicide and suicide, concluded Bodley (1976), are both "decidedly uncommon" among undisturbed gatherer-hunters. The `warlike' nature of Native American peoples was often fabricated to add legitimacy to European aims of conquest (Kroeber 1961); the foraging Comanche maintained their non-violent ways for centuries before the European invasion, becoming violent only upon contact with marauding civilization (Fried 1973).

The development of symbolic culture, which rapidly led to agriculture, is linked through ritual to alienated social life among extant foraging groups. Bloch (1977) found a correlation between levels of ritual and hierarchy. Put negatively, Woodburn (1968) could see the connection between an absence of ritual and the absence of specialized roles and hierarchy among the Hazda of Tanzania. Turner's study of the west African Ndembu (1957) revealed a profusion of ritual structures and ceremonies intended to redress the conflicts arising from the breakdown of an earlier, more seamless society. These ceremonies and structures function in a politically integrative way. Ritual is a repetitive activity for which outcomes and responses are essentially assured by social contract; it conveys the message that symbolic practice, via group membership and social rules, provides control (Cohen 1985). Ritual fosters the concept of control or domination, and has been seen to tend toward leadership roles (Hitchcock 1982) and centralized political structures (Lourandos 1985). A monopoly of ceremonial institutions clearly extends the concept of authority (Bender 1978), and may itself be the original formal authority.

Among agricultural tribes of New Guinea, leadership and the inequality it implies are based upon participation in hierarchies of ritual initiation or upon shamanistic spirit-mediumship (Kelly 1977, Modjeska 1982). In the role of shamans we see a concrete practice of ritual as it contributes to domination in human society.

Radin (1937) discussed "the same marked tendency" among Asian and North American tribal peoples for shamans or medicine men "to organize and develop the theory that they alone are in communication with the supernatural." This exclusive access seems to empower them at the expense of the rest; Lommel (1967) saw "an increase in the shaman's psychic potency...counterbalanced by a weakening of potency in other members of the group." This practice has fairly obvious implications for power relationships in other areas of life, and contrasts with earlier periods devoid of religious lead- ership.

The Batuque of Brazil are host to shamans who each claim control over certain spirits and attempt to sell supernatural services to clients, rather

like priests of competing sects (S. Leacock 1988). Specialists of this type in "magically controlling nature...would naturally come to control men, too," in the opinion of Muller (1961). In fact, the shaman is often the most powerful individual in pre-agricultural societies (e.g. Sheehan 1985); he is in a position to institute change. Johannessen (1987) offers the thesis that resistance to the innovation of planting was overcome by the influence of shamans, among the Indians of the American Southwest, for instance. Similarly, Marquardt (1985) has suggested that ritual authority structures have played an important role in the initiation and organization of production in North America. Another student of American groups (Ingold 1987) saw an important connection between shamans' role in mastering wildness in nature and an emerging subordination of women.

Berndt (1974a) has discussed the importance among Aborigines of ritual sexual division of labor in the development of negative sex roles, while Randolph (1988) comes straight to the point: "Ritual activity is needed to create `proper' men and women." There is "no reason in nature" for gender divisions, argues Bender (1989). "They have to be created by proscription and taboo, they have to be `naturalized' through ideology and ritual."

But gatherer-hunter societies, by their very nature, deny ritual its potential to domesticate women. The structure (non-structure?) of egalitarian bands, even those most oriented toward hunting, includes a guarantee of autonomy to both sexes. This guarantee is the fact that the materials of subsistence are equally available to women and men and that, further, the success of the band is dependent on cooperation based on that autonomy (Leacock 1978, Friedl 1975). The spheres of the sexes are often somewhat separate, but inasmuch as the contribution of women is generally at least equal to that of men, social equality of the sexes is "a key feature of forager societies" (Ehrenberg 1989b). Many anthropologists, in fact, have found the status of women in forager groups to be higher than in any other type of society (e.g. Fluer- Lobban 1979, Rohrlich-Leavitt, Sykes and Weatherford 1975, Leacock 1978).

In all major decisions, observed Turnbull (1970) of the Mbuti, "men and women have equal say, hunting and gathering being equally important." He made it clear (1981) that there is sexual differentiation - probably a good deal more than was the case with their distant forbears - "but without any sense of superordination or subordination." Men actually work more hours than women among the !Kung, according to Post and Taylor (1984).

It should be added, in terms of the division of labor common among contemporary gatherer-hunters, that this differentiation of roles is by no means universal. Nor was it when the Roman historian Tacitus wrote, of

the Fenni of the Baltic region, that "the women support themselves by hunting, exactly like the men...and count their lot happier than that of others who groan over field labor." Or when Procopius found, in the 6th century A.D., that the Serithifinni of what is now Finland "neither till the land themselves, nor do their women work it for them, but the women regularly join the men in hunting."

The Tiwi women of Melville Island regularly hunt (Martin and Voorhies 1975) as do the Agta women in the Philippines (Estioko-- Griffen and Griffen 1981). In Mbuti society, "there is little specialization according to sex. Even the hunt is a joint effort," reports Turnbull (1962), and Cotlow (1971) testifies that "among the traditional Eskimos it is (or was) a cooperative enterprise for the whole family group."

Darwin (1871) found another aspect of sexual equality: "...in utterly barbarous tribes the women have more power in choosing, rejecting, and tempting their lovers, or of afterwards changing their husbands, than might have been expected." The !Kung Bushmen and Mbuti exemplify this female autonomy, as reported by Marshall (1959) and Thomas (1965); "Women apparently leave a man whenever they are unhappy with their marriage," concluded Begler (1978). Marshall (1970) also found that rape was extremely rare or absent among the !Kung.

An intriguing phenomenon concerning gatherer-hunter women is their ability to prevent pregnancy in the absence of any contraception (Silberbauer 1981). Many hypotheses have been put forth and debunked, e.g. conception somehow related to levels of body fat (Frisch 1974, Leibowitz 1986). What seems a very plausible explanation is based on the fact that undomesticated people are very much more in tune with their physical selves. Foraging women's senses and processes are not alienated from themselves or dulled; control over childbearing is probably less than mysterious to those whose bodies are not foreign objects to be acted upon.

The Pygmies of Zaire celebrate the first menstrual period of every girl with a great festival of gratitude and rejoicing (Turnbull 1962). The young woman feels pride and pleasure, and the entire band expresses its happiness. Among agricultural villagers, however, a menstruating woman is regarded as unclean and dangerous, to be quarantined by taboo (Duffy 1984). The relaxed, egalitarian relationship between San men and women, with its flexibility of roles and mutual respect impressed Draper (1971, 1972, 1975); a relationship, she made clear, that endures as long as they remain gatherer-hunters and no longer.

Duffy (1984) found that each child in an Mbuti camp calls every man father and every woman mother. Forager children receive far more care, time, and attention than do those in civilization's isolated nuclear

families. Post and Taylor (1984) described the "almost permanent contact" with their mothers and other adults that Bushman children enjoy. !Kung infants studied by Ainsworth (1967) showed marked precocity of early cognitive and motor skills development. This was attributed both to the exercise and stimulation produced by unrestricted freedom of movement, and to the high degree of physical warmth and closeness between !Kung parents and children (see also Konner 1976).

Draper (1976) could see that "competitiveness in games is almost entirely lacking among the !Kung," as Shostack (1976) observed "!Kung boys and girls playing together and sharing most games." She also found that children are not prevented from experimental sex play, consonant with the freedom of older Mbuti youth to "indulge in premarital sex with enthusiasm and delight" (Turnbull 1981). The Zuni "have no sense of sin," Ruth Benedict (1946) wrote in a related vein. "Chastity as a way of life is regarded with great disfavor...Pleasant relations between the sexes are merely one aspect of pleasant relations with human beings...Sex is an incident in a happy life."

Coontz and Henderson (1986) point to a growing body of evidence in support of the proposition that relations between the sexes are most egalitarian in the simplest foraging societies. Women play an essential role in traditional agriculture, but receive no corresponding status for their contribution, unlike the case of gatherer-hunter society (Chevillard and Leconte 1986, Whyte 1978). As with plants and animals, so are women subject to domestication with the coming of agriculture. Culture, securing its foundations with the new order, requires the firm subjugation of instinct, freedom, and sexuality. All disorder must be banished, the elemen- tal and spontaneous taken firmly in hand. Women's creativity and their very being as sexual persons are pressured to give way to the role, expressed in all peasant religions, of Great Mother, that is, fecund breeder of men and food.

The men of the South American Munduruc, a farming tribe, refer to plants and sex in the same phrase about subduing women: "We tame them with the banana" (Murphy and Murphy 1985). Simone de Beauvoir (1949) recognized in the equation of the plow and the phallus a symbol of male authority over women. Among the Amazonian Jivaro, another agricultural group, women are beasts of burden and the personal property of men (Harner 1972); the "abduction of adult women is a prominent part of much warfare" by these lowland South American tribes (Ferguson 1988). Brutalization and isolation of women seem to be functions of agricultural societies (Gregor 1988), and the female continues to perform most or even all of the work in such groups (Morgan 1985).

Head-hunting is practiced by the above-mentioned groups, as part of

endemic warfare over coveted agricultural land (Lathrap 1970); head-hunting and near-constant warring is also witnessed among the farming tribes of Highlands New Guinea (Watson 1970). Lenski and Lenski's 1974 researches concluded that warfare is rare among foragers but becomes extremely common with agrarian societies. As Wilson (1988) put it succinctly, "Revenge, feuds, rioting, warfare and battle seem to emerge among, and to be typical of, domesticated peoples."

Tribal conflicts, Godelier (1977) argues, are "explainable primarily by reference to colonial domination" and should not be seen as having an origin "in the functioning of pre-colonial structures." Certainly contact with civilization can have an unsettling, degenerative effect, but Godelier's marxism (viz. unwillingness to question domestication/production), is, one suspects, relevant to such a judgment. Thus it could be said that the Copper Eskimos, who have a significant incidence of homicide within their group (Damas 1972), owe this violence to the impact of outside influences, but their reliance on domesticated dogs should also be noted.

Arens (1979) has asserted, paralleling Godelier to some extent, that cannibalism as a cultural phenomenon is a fiction, invented and promoted by agencies of outside conquest. But there is documentation of this practice (e.g. Poole 1983, Tuzin 1976) among, once again, peoples involved in domestication. The studies by Hogg (1966), for example, reveal its presence among certain African tribes, steeped in ritual and grounded in agriculture. Cannibalism is generally a form of cultural control of chaos, in which the victim represents animality, or all that should be tamed (Sanday 1986). Significantly, one of the important myths of Fiji Islanders, "How the Fijians first became cannibals," is literally a tale of planting (Sahlins 1983). Similarly, the highly domesticated and time-conscious Aztecs practiced human sacrifice as a gesture to tame unruly forces and uphold the social equilibrium of a very alienated society. As Norbeck (1961) pointed out, non-domesticated, "culturally impoverished" societies are devoid of cannibalism and human sacrifice.

As for one of the basic underpinnings of violence in more complex societies, Barnes (1970) found that "reports in the ethnographic literature of territorial struggles" between gatherer-hunters are "extremely rare." !Kung boundaries are vague and undefended (Lee 1979); Pandaram territories overlap, and individuals go where they please (Morris 1982); Hazda move freely from region to region (Woodburn 1968); boundaries and trespass have little or no meaning to the Mbuti (Turnbull 1966); and Australian Aborigines reject territorial or social demarcations (Gumpert 1981, Hamilton 1982). An ethic of generosity and hospitality takes the place of exclusivity (Steward 1968,

Hiatt 1968).

Gatherer-hunter peoples have developed "no conception of private property," in the estimation of Kitwood (1984). As noted above in reference to sharing, and with Sansom's (1980) characterization of Aborigines as "people without property," foragers do not share civilization's obsession with externals.

"Mine and thine, the seeds of all mischief, have no place with them," wrote Pietro (1511) of the native North Americans encountered on the second voyage of Columbus. The Bushmen have "no sense of possession," according to Post (1958), and Lee (1972) saw them making "no sharp dichotomy between the resources of the natural environment and the social wealth." There is a line between nature and culture, again, and the non-civilized choose the former.

There are many gatherer-hunters who could carry all that they make use of in one hand, who die with pretty much what they had as they came into the world. Once humans shared everything; with agriculture, ownership becomes paramount and a species presumes to own the world. A deformation the imagination could scarcely equal.

Sahlins (1972) spoke of this eloquently: "The world's most primitive people have few possessions, but they are not poor. Poverty is not a certain small amount of goods, nor is it just a relation between means and ends; above all, it is a relation between people. Poverty is a social status. As such it is the invention of civilization."

The "common tendency" of gatherer-hunters "to reject farming until it was absolutely thrust upon them" (Bodley 1976) bespeaks a nature/culture divide also present in the Mbuti recognition that if one of them becomes a villager he is no longer an Mbuti (Turnbull 1976). They know that forager band and agriculturalist village are opposed societies with opposed values.

At times, however, the crucial factor of domestication can be lost sight of. "The historic foraging populations of the Western Coast of North America have long been considered anomalous among foragers," declared Cohen (1981); as Kelly (1991) also put it, "tribes of the Northwest Coast break all the stereotypes of hunter- gatherers." These foragers, whose main sustenance is fishing, have exhibited such alienated features as chiefs, hierarchy, warfare and slavery. But almost always overlooked are their domesticated tobacco and domesticated dogs. Even this celebrated `anomaly' contains features of domestication. Its practice, from ritual to production, with various accompanying forms of domination, seems to anchor and promote the facets of decline from an earlier state of grace.

Thomas (1981) provides another North American example, that of

the Great Basin Shoshones and three of their component societies, the Kawich Mountain Shoshones, Reese River Shoshones, and Owens Valley Paiutes. The three groups showed distinctly different levels of agriculture, with increasing territoriality or ownership and hierarchy closely corresponding to higher degrees of domestication.

To `define' a disalienated world would be impossible and even undesirable, but I think we can and should try to reveal the unworld of today and how it got this way. We have taken a monstrously wrong turn with symbolic culture and division of labor, from a place of enchantment, understanding and wholeness to the absence we find at the heart of the doctrine of progress. Empty and emptying, the logic of domestication with its demand to control everything now shows us the ruin of the civilization that ruins the rest. Assuming the inferiority of nature enables the domination of cultural systems that soon will make the very earth uninhabitable.

Postmodernism says to us that a society without power relations can only be an abstraction (Foucault, 1982). This is a lie unless we accept the death of nature and renounce what once was and what we can find again. Turnbull spoke of the intimacy between Mbuti people and the forest, dancing almost as if making love to the forest. In the bosom of a life of equals that is no abstraction, that struggles to endure, they were "dancing with the forest, dancing with the moon."

THAT THING WE DO

From the Latin *re*, or thing, reification is essentially thingification. Theodor Adorno, among others, asserted that society and consciousness have become almost completely reified. Through this process, human practices and relations come to be seen as external objects. What is living ends up treated as a non-living thing or abstraction, and this turn of events is experienced as natural, normal, unchallenged.

In *Tristes Tropiques*, Claude Lévi-Strauss provides an image of this reifying process, in terms of the atrophy of European civilization: "...like some aging animal whose thickening hide has formed an imperishable crust around its body and, by no longer allowing the skin to breathe, is hastening the aging process."[1] The loss of meaning, immediacy, and spiritual vibrancy in Western civilization is a major theme in the works of Max Weber, and also bears on the reification of modern life. That this failing of life and enchantment seems somehow inevitable and unchangeable, largely just taken for granted, is as important as the reified outcome, and is inseparable from it.

How did human activities and connections become separate from their subjects and take on a thing-like "life" of their own? And given the evident waning of belief in society's institutions and categories, what holds the "things" in thing-ified society together?

Terms like reification and alienation, in a world more and more comprised of the starkest forms of estrangement, are no longer to be found in the literature that supposedly deals with this world. Those who claim to have no ideology are so often the most constrained and defined by the prevailing ideology they cannot see, and it is possible that the highest degree of alienation is reached where it no longer enters consciousness.

Reification became a widely employed term as defined by the marxist Georg Lukacs: namely, a form of alienation issuing from the commodity fetishism of modern market relations. Social conditions and the plight of the individual have become mysterious and impenetrable as a function of what we now commonly refer to as consumerist capitalism. We are crushed and blinded by the reifying force of the stage of capital that began in the 20th century.

I think, however, that it may be useful to re-cast reification so as to

establish a much deeper meaning and dynamic. The merely and directly human is in fact being drained away as surely as nature itself has been tamed into an object. In the frozen universe of commodities, the reign of things over life is obvious, and that coldness that Adorno saw as the basic principle of bourgeois subjectivity is plumbing new lows.

But if reification is the central mechanism whereby the commodity form permeates the entire culture, it is also much more than that. Kant knew the term, and it was Hegel, soon after, who made major use of it (and objectification, its rough equivalent). He discovered a radical lack of being at the heart of the subject; it is here that we may fruitfully inquire.

The world presents itself to us––and we re-present it. Why the need to do that? Do we know what symbols really symbolize? Is truth that which must be possessed, not re-presented? Signs are basically signals, that is, correlative; but symbols are substitutive.

As Husserl put it, "The symbol exists effectively at the point where it introduced something more than life...."[2] Reification may be an unavoidable corollary or by-product of symbolization itself.

At a minimum, there seem to be reified fundamentals in all networks of domination. Calendars and clocks formalize and further reify time, which was likely the first reification of all. The divided social structure is a reified world largely because it is a symbolic structure of roles and images, not persons. Power crystallizes into networks of domination and hierarchy as reification enters the equation very early on. In the current productionist world, extreme division of labor fulfills its original meaning. Made increasingly passive and meaningless, we endlessly reify ourselves. Our mounting impoverishment approaches the condition in which we are mere things.

Reification permeates postmodern culture, in which only appearances change, and appear alive. The dreadfulness of our postmodernity can be seen as a destination of the history of philosophy, and a destination of a good deal more than just philosophy. History *qua* history begins as loss of integrity, immersion in an external trajectory that tears the self into parts. The denial of human choice and effective agency is as old as division of labor; only its drastic development or fullness is new.

About 250 years ago the German romantic Novalis complained that "the meaning of life has been lost."[3] Widespread questioning of the meaning of life only began at about this time, just as industrialism made its very first inroads.[4] From this point on, an erosion of meaning has quickly accelerated, reminding us that the substitutive function of symbolization is also prosthetic. The replacement of the living by the artificial, like technology, involves a thing-ification. Reification is always, at least in part, a techno-imperative.

Technology is "the knack of so arranging the world that we need not experience it."[5] We are expected to deny what is living and natural within us in order to acquiesce in the domination of non-human nature. Technology has unmistakably become the great vehicle of reification. Not forgetting that it is embedded in and embodies an ever-expanding, global field of capital, reification subordinates us to our own objectified creations. ("Things are in the saddle and ride mankind," observed Emerson in the mid-19th century.) Nor is this a recent turn of events; rather, it reflects the master code of culture, *ab origino*. The separation from nature, and its ensuing pacification and manipulation, make one ask, is the individual vanishing? Has culture itself set this in motion? How has it come to pass that a formulation as reified as "children are our most precious resource" does not seem repugnant to everyone?

We are captives of so much that is not only instrumental, fodder for the functioning of other manipulable things, but also ever more simulated. We are exiles from immediacy, in a fading and flattening landscape where thought struggles to unlearn its alienated conditioning. Merleau-Ponty failed in his quest, but at least aimed at finding a primordial ontology of vision prior to the split between subject and object. It is division of labor and the resulting conceptual forms of thought that go unchallenged, delaying discovery of reification and reified thought.

It is, after all, our whole way of knowing that has been so deformed and diminished, and that must be understood as such. "Intelligence" is now an externality to be measured, equated to proficiency in manipulating symbols. Philosophy has become the highly elaborate rationalization of reifications. And even more generally, being itself is constituted as experience and representation, *as subject and object*. These outcomes must be criticized as fundamentally as possible.

The active, living element in cognition must be uncovered, beneath the reifications that mask it. Cognition, despite contemporary orthodoxy, is not computation. The philosopher Ryle glimpsed that a form of knowledge that does not rely on symbolic representation might be the basic one.[6] Our notions of reality are the products of an artificially constructed symbol system, whose components have hardened into reifications or objectifications over time, as division of labor coalesced into domination of nature and domestication of the individual.

Thought capable of producing culture and civilization is distancing, non sensuous. It abstracts from the subject and becomes an independent object. It's telling that sensations are much more resistant to reification than are mental images. Platonic discourse is a prime example of thinking that proceeds at the expense of the senses, in its radical split between perceptions and conceptions. Adorno draws attention to the healthier variant by his observation that in Walter Benjamin's writings

"thought presses close to the object, as if through touching, smelling, tasting, it wanted to transform itself".[7]. And Le Roy is probably very close to the mark with "we resign ourselves to conception only for want of perception."[8] Historically determined in the deepest sense, the reification aspect of thought is a further cognitive "fall from grace."

Husserl and others figured symbolic representation as originally designed to be only a temporary supplement to authentic expression. Reification enters the picture in a somewhat parallel fashion, as representation passes from the status of a noun used for specific purposes to that of an object. Whether or not these descriptive theses are adequate, it seems at least evident that an ineluctable gap exists between the concept's abstraction and the richness of the web or phenomena. To the point here is Heidegger's conclusion that authentic thinking is "non-conceptual," a kind of "reverential listening."[9]

Always of the utmost relevance is the violence that a steadily encroaching technological ethos perpetrates against lived experience. Gilbert Germain has understood how the ethos forcefully promotes a "forgetfulness of the linkage between reflective thought and the direct perceptual experience of the world from which it arises and to which it ought to return."[10] Engels noted in passing that "human reason has developed in accordance with man's alteration of nature,"[11] a mild way of referring to the close connection between objectifying, instrumentalizing reason and progressive reification.

In any case, the thought of civilization has worked to reduce the abundance that yet manages to surround us. Culture is a screen through which our perceptions, ideas, and feelings are filtered and domesticated. According to Jean-Luc Nancy, the main thing representational thought represents is its limit.[12] Heidegger and Wittgenstein, possibly the most original of 20th century thinkers, ended up disclaiming philosophy along these lines.

The reified life-world progressively removes what questions it. The literature on society raises ever fewer basic questions about society, and the suffering of the individual is now rarely related to even this unquestioned society. Emotional desolation is seen as almost entirely a matter of freely-occurring "natural" brain or chemical abnormalities, having nothing to do with the destructive context the individual is generally left to blindly endure in a drugged condition.

On a more abstract level, reification can be neutralized by conflating it with objectification, which is defined in a way that places it beyond questioning. Objectification in this sense is taken to mean an awareness of the existence of subjects and objects, and the fact of the self as both subject and object. Hegel, in this vein, referred to it as the very essence of the subject, without which there can be no development.

Adorno saw some reification as a necessary element in the necessary process of human objectification. As he became more pessimistic about the realization of a de-reified society, Adorno used reification and objectification as synonyms,[13] completing a demoralized retreat from fully calling either term into question.

I think it may be instructive to accept the two terms as synonymous, not to end up accepting them both but to entertain the notion of exploring basic alienation. All objectification requires an alienation of subject from object, which is fundamental, it would seem, to the goal of reconciling them. How did we get to this horrendous present, definable as a condition in which the reified subject and the reified object mutually entail one another? How is it that, as William Desmond put it, "the intimacy of being is dissolved in the modern antithesis of subject and object?"[14]

As the world is shaped via objectification, so is the subject: the world as a field of objects open to manipulation. Objectification, as the basis for the domination of nature as external, alien other, presents itself. Clearer still is the use of the term by Marx and Lukacs as the natural means by which humans master the world.

The shift from objects to objectification, from reality to constructions of reality, is also the shift to domination and mystification. Objectification is the take-off point for culture, in that it is makes domestication possible. It reaches its full potential with the onset of division of labor; the exchange principle itself moves on the level of objectification. Similarly, none of the institutions of divided society are powerful or determinative without a reified element.

The philosopher Croce considered it sheer rhetoric to speak of a beautiful river or flower; to him, nature was stupid compared to art. This elevation of the cultural is possible only through objectification. The works of Kafka, on the other hand, portray the outcome of objectifying cultural logic, with their striking illustration of a reified landscape that crushes the subject.

Representation and production are the foundations of reification, which cements and extends their empire. Reification's ultimately distancing, domesticating orientation decrees the growing separation between reduced, rigidified subjects and an equally objectified field of experience. As the Situationist line goes, today the eye sees only things and their prices. The genesis of this outlook is vastly older than their formulation denotes; the project of de-objectification can draw strength from the human condition that obtained before reification developed. A "future primitive" is called for, where a living involvement with the world, and fluid, intimate participation in nature will replace the thingified reign of symbolic civilization.

The very first symptom of alienated life is the very gradual appearance of time. The first reification and increasingly the quintessential one, time is virtually synonymous with alienation. We are now so pervasively ruled and regulated by this "it" which of course has no concrete existence that thinking of a pre-civilized, timeless epoch is extremely difficult.

Time is the symptom of symptoms to come. The relationship of subject and object must have been radically different before temporal distance advanced into the psyche. It has come to stand over us as an external thing––predecessor to work and the commodity, separate and dominating as described by Marx. This de-presentizing force implies that de-reification would mean a return to the eternal present wherein we lived before we entered the pull of history.

E.M. Cioran asks, "How can you help resenting the absurdity of time, its march into the future, and all the nonsense about evolution and progress? Why go forward, why live in time."[15] Walter Benjamin's plea for shattering the reified continuity of history was somewhat similarly based on his yearning for a wholeness or unity of experience. At some point, the moment itself matters and does not rely on other moments "in time."

It was of course the clock that completed the reification, by dissociating time from human events and natural processes. Time by now was fully exterior to life and incarnated in the first fully mechanized device. In the 15th century Giovanni Tortelli wrote that the clock "seems to be alive, since it moves of its own accord."[16] Time had come to measure its contents, no longer contents measuring time. We so often say we "don't have time," but it is the basic reification, time, that has us.

Fragmented life cannot become the norm without the primary victory of time. The complexity, particularity, and diversity of all living creatures cannot be lost to the standardizing realm of the quantitative without this key objectification.

The question of the origin of reification is a compelling one that has rarely been pursued deeply enough. A common error has been to confuse intelligence with culture; namely, the absence of culture is seen as equivalent to the absence of intelligence. This confusion is further compounded when reification is seen as inherent to the nature of mental functioning. From Thomas Wynn[17] and others we now know that pre-historic humans were our equals in intelligence. If culture is impossible without objectification, it does not follow that either is inevitable, or desirable.

As suspicious as Adorno was of the idea of origins, he conceded that human conduct originally involved no objectification.[18] Husserl was similarly able to refer to the primordial oneness of all consciousness

prior to its dissociation.[19]

Bringing this condition of life into focus has proven elusive at best. Lévi-Strauss began his anthropological work with such a quest in mind: "I had been looking for a society reduced to its simplest expression. That of the Nambikwara was so truly simple that all I could find was human beings."[20] In other words, he was really still looking for symbolic culture, and seemed ill-equipped to ponder the meaning of its absence. Herbert Marcuse wanted human history to conform to nature as a subject-object harmony, but he knew that "history is the negation of nature."[21] The postmodern outlook positively celebrates the reifying presence of history and culture by denying the possibility that a pre-objectificational state ever existed. Having surrendered to representation––and every other basic given of past, present, and future barrenness––the postmodernists could scarcely be expected to explore the genesis of reification.

If not the original reification, language is the most consequential, as cornerstone of representational culture. Language is the reification of communication, a paradigmatic move that establishes every other mental separation. The philosopher W.V. Quine's variation on this is that reification arrives with the pronoun.[22]

"In the beginning was the Word...," the beginning of all this, which is killing us by limiting existence to many *things*. Corollary of symbolization, reification is a sclerosis that chokes off what is living, open, natural. In place of being stands the symbol. If it is impossible for us to coincide with our being, Sartre argues in *Being and Nothingness*, then the symbolic is the measure of that non-coincidence. Reification seals the deal, and language is its universal currency.

An exhausted symbolic mediation with less and less to say prevails in a world where that mediation is now seen as the central, even defining fact of life. In an existence without vibrancy or meaning, nothing is left but language. The relation of language to reality has dominated 20th century philosophy. Wittgenstein, for example, was convinced that the foundation of language and of linguistic meaning is the very basis of philosophy.

This "linguistic turn" appears even more profound if we consider the entire species-sense of language, including its original impact as a radical departure. Language has been fundamental to our obligation to objectify ourselves, in a milieu that is increasingly not our own. Thus it is absurd for Heidegger to say that the truth about language is that it refuses to be objectified. The reificational act of language impoverishes existence by creating a universe of meaning sufficient unto itself. The ultimate "sufficient unto itself" is the concept "God," and its ultimate description is, revealingly, "I am Who I am"(Exodus 4:14). We have come

to regard the separate, self-enclosed nature of objectification as the highest quality, evidently, rather than as the debasement of the "merely" contingent, relational, connected.

It has been recognized for some time that thought is not language-dependent and that language limits the possibilities of thought.[23] Gottlob Frege wondered if to think in a non-reified way is possible, how it could be possible to explain how thinking can ever be reified. The answer was not to be found in his chosen field of formal logic.

In fact, language does proceed as a thing external to the subject, and molds our cognitive processes. Classic psychoanalytic theory ignored language, but Melanie Klein discussed symbolization as a precipitant of anxiety. To translate Klein's insight into cultural terms, anxiety about erosion of a non-objectified life-world provokes language. We experience "the urge to thrust against language,"[24] when we feel that we have given up our voices, and are left only with language. The enormity of this loss is suggested in C.S. Peirce's definition of the self as mainly a consistency of symbolization; "my language," conversely, "is the sum total of my self," he concluded.[25] Given this kind of reduction, is not difficult to agree with Lacan that induction into the symbolic world generates a persistent yearning that arises from one's absence from the real world. "The speechform is a mere sorrogate," wrote Joyce in *Finnegan's Wake*.

Language refutes every appeal to immediacy by dishonoring the unique and immobilizing the mobile. Its elements are independent entities from the consciousness that utters them, which in turn weigh down that consciousness. According to Quine, this reification plays a part in creating a "structured system of the world," by closing up the "loose ends of raw experience."[26] Quine does not recognize the limiting aspects of this project. In his incomplete final work, the phenomenologist Merleau-Ponty began to explore how language diminishes an original richness, how it actually works against perception.

Language, as a separate medium, does indeed facilitate a structured system, based on itself, that deals with anarchic "loose ends" of experience. It accomplishes this, basically in the service of division of labor, by avoiding the here and now of experience. "Seeing is forgetting the name of the thing one sees," an anti-reification statement by Paul Valéry,[27] suggests how words get in the way of direct apprehension. The Murngin of northern Australia saw name-giving as a kind of death, the loss of an original wholeness.[28] A pivotal moment of reification occurred when we succumbed to names and became inscribed in letters. It is perhaps when we most need to express ourselves, fully and completely, that language most clearly reveals its reductive and inarticulate nature.

Language itself corrupts, as Rousseau claimed in his famous dream of a community stripped of it. The path beyond the claims of reification involves breaking representation's age-old spell.

Another basic avenue of reification is ritual, which originated as a means to instill conceptual and social order. Ritual is an objectified schema of action, involving symbolic behavior that is standardized and repetitive. It is the first fetishizing of culture, and points decisively toward domestication. Concerning the latter, ritual can be seen as the original model of calculability of production. Along these lines, Georges Condominas challenged the distinction that is ordinarily made between ritual and agriculture. His fieldwork in Southeast Asia led him to see ritual as an integral component of the technology of traditional farming.[29]

Mircea Eliade has described religious rites as real only to the extent that they imitate or symbolically repeat some kind of archetypal event, adding that participation is felt to be genuine only to the extent of this identification; that is, only to the extent that the participant ceases to be himself or herself.[30] Thus the repetitive ritual act is very closely related to the depersonalizing, devaluing essence of division of labor, and at the same time approaches a virtual definition of the reifying process itself. To lose oneself in fealty to an earlier, frozen event or moment: to become reified, a thing that owes its supposed authenticity to some prior reification.

Religion, like the rest of culture, springs from the false notion of the necessity for combat against the forces of nature. The powers of nature are reified, along with those of their religious or mythological counterparts. From animism to deism, the divine develops against a natural world depicted as increasingly threatening and chaotic. J.G. Frazier saw religious and magical phenomena as "the conscious conversion of what had hitherto been regarded as living beings into impersonal substances."[31] To deify is to reify, and a November 1997 discovery by archaeologist Juan Vadeum helps us situate the domesticating context of this movement. In Chiapas, Mexico, Vadeum found four Mayan stone carvings that represent original "grandfathers" of wisdom and power.

Significantly, these figures of seminal importance to Mayan religion and cosmology symbolize War, Agriculture, Trade, and Tribute.[32] As Feuerbach noted, every important stage in the history of human civilization begins with religion,[33] and religion serves civilization both substantively and formally. In its formal aspect, the reifying nature of religion is the most potent contribution of all.

Art is the other early objectification of culture, which is what makes it into a separate activity and gives it reality. Art is also a quasi-utopian

promise of happiness, always broken. The betrayal resides largely in the reification. "To be a work of art means to set up a world," according to Heidegger,[34] but this counter-world is powerless against the rest of the objectified world of which it remains a part.

Georg Simmel described the triumph of form over life, the danger posed to individuality by the surrender to form. The dualism of form and content is the blueprint for reification itself, and partakes in the basic divisions of class society.

At base there is an abstract and somewhat narrow similarity to all aesthetic appearance., This is due to a severe restriction of the sensual, enemy number one of reification. And remembering our Freud, it is the curbing of Eros that makes culture possible. Can it be an accident that the three senses that are excluded from art––touch, smell, and taste––are the senses of sensual love?

Max Weber recognized that culture "appears as man's emancipation from the organically prescribed cycle of natural life. For this very reason," he continued, "culture's every step forward seems condemned to lead to an ever more devastating senselessness."[35] The representation of culture is followed by pleasure in representation that replaces pleasure per se. The will to create culture overlooks the violence in and of culture, a violence that is inescapable given culture's basis in fragmentation and separation. Every reification forgets this.

For Homer, the idea of barbarism was of a piece with the absence of agriculture. Culture and agriculture have always been linked by their common basis of domestication; to lose the natural within us is to lose nature without. One becomes a thing in order to master things.

Today the culture of global capitalism abandons its claim to be culture, even as the production of culture exceeds the production of goods. Reification, the process of culture, dominates when all awaits naturalization, in a constantly transformed environment that is "natural" in name only. Objects themselves––and even the "social" relationships among them––are seen as real only insofar as they are recognized as existing in mediaspace or cyberspace.

A domesticating reification renders everything, including us, its objects. And these objects possess less and less originality or aura, as discussed by commentators from Baudelaire and Morris to Benjamin and Baudrillard. "Now from America empty indifferent things are pouring across, sham things, dummy life," wrote Rilke.[36] Meanwhile the whole natural world has become a mere object.

Postmodern practice severs things from their history and context, as in the device of inserting "quotations" or arbitrarily juxtaposed elements from other periods into music, painting, novels. This gives the objects a rootless autonomy of sorts, while subjects have little or none. We

seem to be objects destroyed by objectification, our grounding and authenticity leached away. We are like the schizophrenic who actively experiences himself as a thing.

There is a coldness, even a deadness, that is becoming impossible to deny. A palpable sense of "something missing" inheres in the unmistakable impoverishment of a world objectifying itself. Our only hope may lie precisely in the fact that the madness of the whole is so apparent.

It is still maintained that reification is an ontological necessity in a complex world, which is exactly the point. The de-reifying act must be the return to simple, non-divided life. The life congealed and concealed in petrified thingness cannot reawaken without a vast undoing of this ever-more standardized, massified lost world.

Until fairly recently––until civilization––nature was a subject, not an object. In hunter-gatherer societies no strict division or hierarchy existed between the human and the non-human. The participatory nature of vanished connectedness has to be restored, that condition in which meaning was lived, not objectified into a grid of symbolic culture. The very positive picture we now have of pre-history establishes a perspective of anticipatory remembrance: there is the horizon of subject-object reconciliation.

This prior participation with nature is the reverse of the domination and distancing at the heart of reification. It reminds us that all desire is a desire for relationship, at its best reciprocal and animate. To enable this nearness or presence is a gigantic practical project, that will make an end to these dark days.

ENDNOTES

1. Claude Lévi-Strauss, *Tristes Tropiques* (New York, 1972), p. 382.
2. Edmund Husserl, *Le Discours et le Symbole* (Paris, 1962), p. 66.
3. Novalis, *Schriften*, vol. II (Stuttgart, 1965–1977), p. 594.
4. Iddo Landau, "Why Has the Question of the Meaning of Life Arisen in the Last Two and a Half Centuries?" *Philosophy Today*, Summer 1967.
5. Quote attributed to the playwright Max Frisch. Source unknown.
6. Gilbert Ryle, *The Concept of Mind* (London, 1949)
7. Theodor Adorno, *Prisms* (Cambridge, 1981), p. 240.
8. Eduoard Le Roy, *The New Philosophy of Henri Bergson* (New York, 1913), p. 156.
9. Martin Heidegger, "What is Thinking?" in *Basic Writings* (New York, 1969)
10. Gilbert B. Germain, *A Discourse on Disenchantment* (Albany, 1992), p. 126.
11. Friedrich Engels, *Dialectic of Nature* (Moscow, 1934), p. 231.
12. Jean-Luc Nancy, *The Birth to Presence* (Stanford, 1993), p. 2.
13. Theodor Adorno, *Prisms* (Cambridge, 1983) p. 262, for example.

14. William Desmond, *Perplexity and Ultimacy* (Albany, 1995), p. 64.
15. E.M. Cioran, *On the Heights of Despair* (Chicago, 1990), p. 126.
16. Giovanni Tortelli, *De Orthographia*, 1471.
17. Thomas Wynn, *The Evolution of Spatial Competence* (Urbana, 1989).
18. Theodor Adorno, *Aesthetic Theory* (Minneapolis, 1997), pp. 118, 184.
19. Edmund Husserl, *The Crisis of European Sciences and Transcendental Phenomenology* (Evanston, 1970)
20. Lévi-Strauss, *op.cit.*, p. 358.
21. Herbert Marcuse, *One Dimensional Man* (Boston, 1964), p. 236.
22. W.V. Quine, *From Stimulus to Science* (Cambridge, 1995), p. 27.
23. Maxine Sheets-Johnstone, *The Roots of Thinking* (Philadelphia, 1990)
24. Ludwig Wittgenstein, "Wittgenstein's Lecture on Ethics," *Philosophical Review* 74 (1965), p. 12.
25. C.S. Peirce, *Collected Papers* (Cambridge, 1931-1958), vol. 5, pp. 28, 29.
26. Quine, *op.cit.*, p. 29.
27. Quotation is title of Robert Irwin's autobiographical work (Berkeley, 1982).
28. Bradd B. Shore, *Culture in Mind* (New York, 1996), p. 222.
29. Georges Condominas, *We Have Eaten the Forest* (New York, 1977).
30. Mircea Eliade, quoted in *False Consciousness*, by Joseph Gabel (Oxford, 1975), p. 39.
31. J.G. Frazier, *The Golden Bough: A Study in Magic and Religion* (New York, 1932-36), XLIX, p. 74.
32. Mark Stevenson, "Mayan Stone's Discovery May Confirm Ancient Text" (Associated Press, November 17, 1997).
33. Ludwig Feuerbach, *Lectures on the Essence of Religion* (New York, 1967), p. 209.
34. Martin Heidegger, "The Origin of the Work of Art," in *Basic Writings* (New York, 1969), p. 170.
35. Max Weber, "Religious Rejections of the World and their Directions," in *Essays on Sociology*, Hans Gerth and C. Wright Mills, eds. (New York, 1958), pp. 356-357.
36. Rainer Maria Rilke, *Letters of Rilke*, vol. 2 (New York, 1969), p. 374.

RUNNING ON EMPTINESS
THE FAILURE OF SYMBOLIC THOUGHT

To what degree can it be said that we are really living? As the substance of culture seems to shrivel and offer less balm to troubled lives, we are led to look more deeply at our barren times. And to the place of culture itself in all this.

An anguished Ted Sloan asks (1996), "What is the problem with modernity? Why do modern societies have such a hard time producing adults capable of intimacy, work, enjoyment, and ethical living? Why is it that signs of damaged life are so prevalent?" According to David Morris (1994), "Chronic pain and depression, often linked and occasionally even regarded as a single disorder, constitute an immense crisis at the center of postmodern life." We have cyberspace and virtual reality, instant computerized communication in the global village; and yet have we ever felt so impoverished and isolated?

Just as Freud predicted that the fullness of civilization would mean universal neurotic unhappiness, anti-civilization currents are growing in response to the psychic immiseration that envelops us. Thus symbolic life, essence of civilization, now comes under fire.

It may still be said that this most familiar, if artificial, element is the least understood, but felt necessity drives critique, and many of us feel driven to get to the bottom of a steadily worsening mode of existence. Out of a sense of being trapped and limited by symbols comes the thesis that the extent to which thought and emotion are tied to symbolism is the measure by which absence fills the inner world and destroys the outer world.

We seem to have experienced a fall into representation, whose depths and consequences are only now being fully plumbed. In a fundamental sort of falsification, symbols at first mediated reality and then replaced it. At present we live within symbols to a greater degree than we do within our bodily selves or directly with each other.

The more involved this internal representational system is, the more distanced we are from the reality around us. Other connections, other cognitive perspectives are inhibited, to say the least, as symbolic communication and its myriad representational devices have accomplished an alienation from and betrayal of reality.

This coming between and concomitant distortion and distancing is ideological in a primary and original sense; every subsequent ideology

is an echo of this one. Debord depicted contemporary society as exerting a ban on living in favor of its representation: images now in the saddle, riding life. But this is anything but a new problem. There is an imperialism or expansionism of culture from the beginning. And how much does it conquer? Philosophy today says that it is language that thinks and talks. But how much has this always been the case?

Symbolizing is linear, successive, substitutive; it cannot be open to its whole object simultaneously. Its instrumental reason is just that: manipulative and seeking dominance. Its approach is "let a stand for b" instead of "let a be a." Language has its basis in the effort to conceptualize and equalize the unequal, thus bypassing the essence and diversity of a varied, variable richness.

Symbolism is an extensive and profound empire, which reflects and makes coherent a world view, and is itself a world view based upon withdrawal from immediate and intelligible human meaning.

James Shreeve, at the end of his Neanderthal Enigma (1995), provides a beautiful illustration of an alternative to symbolic being. Meditating upon what an earlier, non-symbolic consciousness might have been like, he calls forth important distinctions and possibilities:

> "...where the modern's gods might inhabit the eland, the buffalo, or the blade of grass, the Neandertal's spirit was the animal or the grass blade, the thing and its soul perceived as a single vital force, with no need to distinguish them with separate names. Similarly, the absence of artistic expression does not preclude the apprehension of what is artful about the world. Neandertals did not paint their caves with the images of animals. But perhaps they had no need to distill life into representations, because its essences were already revealed to their senses. The sight of a running herd was enough to inspire a surging sense of beauty. They had no drums or bone flutes, but they could listen to the booming rhythms of the wind, the earth, and each other's heartbeats, and be transported."

Rather than celebrate the cognitive communion with the world that Shreeve suggests we once enjoyed, much less embark on the project of seeking to recover it, the use of symbols is of course widely considered the hallmark of human cognition. Goethe said, "Everything is a symbol," as industrial capitalism, milestone of mediation and alienation, took off. At about the same time Kant decided that the key

to philosophy lies in the answer to the question, "What is the ground of the relation of that in us which we call 'representation' to the object?" Unfortunately, he divined for modern thought an ahistorical and fundamentally inadequate answer, namely that we are simply not constituted so as to be able to understand reality directly. Two centuries later (1981), Emmanuel Levinas came much closer to the mark with "Philosophy, in its very diachrony, is the consciousness of the breakup of consciousness."

Eli Sagan (1985) spoke for countless others in declaring that the need to symbolize and live in a symbolic world is, like aggression, a human need so basic that "it can be denied only at the cost of severe psychic disorder." The need for symbols––and violence––did not always obtain, however. Rather, they have their origins in the thwarting and fragmenting of an earlier wholeness, in the process of domestication from which civilization issued. Apparently driven forward by a gradually quickening growth in the division of labor that began to take hold in the Upper Paleolithic, culture emerged as time, language, art, number, and then agriculture.

The word culture derives from the Latin cultura, referring to cultivation of the soil; that is, to the domestication of plants and animals––and of ourselves in the bargain. A restless spirit of innovation and anxiety has largely been with us ever since, as continually changing symbolic modes seek to fix what cannot be redressed without rejecting the symbolic and its estranged world.

Following Durkheim, Leslie White (1949) wrote, "Human behavior is symbolic behavior; symbolic behavior is human behavior. The symbol is the universe of humanity." It is past time to see such pronouncements as ideology, serving to shore up the elemental falsification underneath a virtually all-encompassing false consciousness. But if a fully developed symbolic world is not, in Northrop Frye's bald claim (1981), in sum "the charter of our freedom," anthropologist Clifford Geertz (1965) comes closer to the truth in saying that we are generally dependent on "the guidance provided by systems of significant symbols." Closer yet is Cohen (1974), who observed that "symbols are essential for the development and maintenance of social order." The ensemble of symbols represents the social order and the individual's place in it, a formulation that always leaves the genesis of this arrangement unquestioned. How did our behavior come to be aligned by symbolization?

Culture arose and flourished via domination of nature, its growth a measure of that progressive mastery that unfolded with ever greater division of labor. Malinowski (1962) understood symbolism as the soul of civilization, chiefly in the form of language as a means of coordinating action or of standardizing technique, and providing rules for social, ritual, and industrial behavior.

It is our fall from a simplicity and fullness of life directly experienced,

from the sensuous moment of knowing, which leaves a gap that the symbolic can never bridge. This is what is always being covered over by layers of cultural consolations, civilized detouring that never recovers lost wholeness. In a very deep sense, only what is repressed is symbolized, because only what is repressed needs to be symbolized. The magnitude of symbolization testifies to how much has been repressed; buried, but possibly still recoverable.

Imperceptibly for a long while, most likely, division of labor very slowly advanced and eventually began to erode the autonomy of the individual and a face-to-face mode of social existence. The virus destined to become full-blown as civilization began in this way: a tentative thesis supported by all that victimizes us now. From initial alienation to advanced civilization, the course is marked by more and more reification, dependence, bureaucratization, spiritual desolation, and barren technicization.

Little wonder that the question of the origin of symbolic thought, the very air of civilization, arises with some force. Why culture should exist in the first place appears, increasingly, a more apt way to put it. Especially given the enormous antiquity of human intelligence now established, chiefly from Thomas Wynn's persuasive demonstration (1989) of what it took to fashion the stone tools of about a million years ago. There was a very evident gap between established human capability and the initiation of symbolic culture, with many thousands of generations intervening between the two.

Culture is a fairly recent affair. The oldest cave art, for example, is in the neighborhood of 30,000 years old, and agriculture only got underway about 10,000 years ago. The missing element during the vast interval between the time when I.Q. was available to enable symbolizing, and its realization, was a shift in our relationship to nature. It seems plausible to see in this interval, on some level that we will perhaps never fathom, a refusal to strive for mastery of nature. It may be that only when this striving for mastery was introduced, probably non-consciously, via a very gradual division of labor, did the symbolizing of experiences begin to take hold.

But, it is so often argued, the violence of primitives––human sacrifice, cannibalism, head-hunting, slavery, etc.––can only be tamed by symbolic culture/civilization. The simple answer to this stereotype of the primitive is that organized violence was not ended by culture, but in fact commenced with it. William J. Perry (1927) studied various New World peoples and noted a striking contrast between an agricultural group and a non-domesticated group. He found the latter "greatly inferior in culture, but lacking [the former's] hideous customs." While virtually every society that adopted a domesticated relationship to nature, all over the globe, became subject to violent practices, the non-agricultural knew no organized violence. Anthropologists have long focused on

the Northwest Coast Indians as a rare exception to this rule of thumb. Although essentially a fishing people, at a certain point they took slaves and established a very hierarchical society. Even here, however, domestication was present, in the form of tame dogs and tobacco as a minor crop.

We succumb to objectification and let a web of culture control us and tell us how to live, as if this were a natural development. It is anything but that, and we should be clear about what culture/civilization has in fact given us, and what it has taken away.

The philosopher Richard Rorty (1979) described culture as the assemblage of claims to knowledge. In the realm of symbolic being the senses are depreciated, because of their systematic separation and atrophy under civilization. The sensual is not considered a legitimate source of claims to truth.

We humans once allowed a full and appreciative reception to the total sensory input, what is called in German umwelt, or the world around us. Heinz Werner (1940, 1963) argued that originally a single sense obtained, before divisions in society ruptured sensory unity. Surviving non-agricultural peoples often exhibit, in the interplay and interpenetration of the senses, a very much greater sensory awareness and involvement than do domesticated individuals (E. Carpenter 1980). Striking examples abound, such as the Bushmen, who can see four moons of Jupiter with the unaided eye and can hear a single-engine light plane seventy miles away (Farb 1978).

Symbolic culture inhibits human communication by blocking and otherwise suppressing channels of sensory awareness. An increasingly technological existence compels us to tune out most of what we could experience. The William Blake declaration comes to mind:

> "If the doors of perception were cleansed,
> everything would appear to man as it is, infinite.
> For man has closed himself up, 'till he sees all
> things through narrow chinks of his cavern."

Laurens van der Post (1958) described telepathic communication among the Kung in Africa, prompting Richard Coan (1987) to characterize such modes as "representing an alternative, rather than a prelude to the kind of civilization in which we live."

In 1623 William Drummond wrote, "What sweet contentments doth the soul enjoy by the senses. They are the gates and windows of its knowledge, the organs of its delight." In fact, the "I," if not the "soul," doesn't exist in the absence of bodily sensations; there are no non-sensory conscious states.

But it is all too evident how our senses have been domesticated in a symbolic cultural atmosphere: tamed, separated, arranged in a

revealing hierarchy. Vision, under the sign of modern linear perspective, reigns because it is the least proximal, most distancing of the senses. It has been the means by which the individual has been transformed into a spectator, the world into a spectacle, and the body an object or specimen. The primacy of the visual is no accident, for an undue elevation of sight not only situates the viewer outside what he or she sees, but enables the principle of control or domination at base. Sound or hearing as the acme of the senses would be much less adequate to domestication because it surrounds and penetrates the speaker as well as the listener.

Other sensual faculties are discounted far more. Smell, which loses its importance only when suppressed by culture, was once a vital means of connection with the world. The literature on cognition almost completely ignores the sense of smell, just as its role is now so circumscribed among humans. It is, after all, of little use for purposes of domination; considering how smell can so directly trigger even very distant memories, perhaps it is even a kind of anti-domination faculty. Lewis Thomas (1983) remarked that "The act of smelling something, anything, is remarkably like the act of thinking itself." And if it isn't it very likely used to be and should be again.

Tactile experiences or practices are another sensual area we have been expected to relinquish in favor of compensatory symbolic substitutes. The sense of touch has indeed been diminished in a synthetic, work-occupied, long-distance existence. There is little time for or emphasis on tactile stimulation or communication, even though such deprival causes clearly negative outcomes. Nuances of sensitivity and tenderness become lost, and it is well known that infants and children who are seldom touched, carried and caressed are slow to develop and are often emotionally stunted.

Touching by definition involves feeling; to be "touched" is to feel emotionally moved, a reminder of the earlier potency of the tactile sense, as in the expression "keep in touch." The lessening of this category of sensuousness, among the rest, has had momentous consequences. Its renewal, in a re-sensitized, reunited world, will bring a likewise momentous improvement in living. As Tommy cried out, in The Who's rock opera of the same name, "See me, feel me, touch me, heal me...."

As with animals and plants, the land, the rivers, and human emotions, the senses come to be isolated and subdued. Aristotle's notion of a "proper" plan of the universe dictated that "each sense has its proper sphere." Freud, Marcuse and others saw that civilization demands the sublimation or repression of the pleasures of the proximity senses so that the individual can be thus converted to an instrument of labor. Social control, via the network of the symbolic, very deliberately disempowers the body. An alienated counter-world, driven on to greater estrangement by ever-greater division of labor, humbles one's own

somatic sensations and fundamentally distracts from the basic rhythms of one's life.

The definitive mind-body split, ascribed to Descartes' 17th century formulations, is the very hallmark of modern society. What has been referred to as the great "Cartesian anxiety" over the specter of intellectual and moral chaos, was resolved in favor of suppression of the sensual and passionate dimension of human existence. Again we see the domesticating urge underlying culture, the fear of not being in control, now indicting the senses with a vengeance. Henceforth science and technology
have a theoretic license to proceed without limits, sensual knowledge having been effectively eradicated in terms of claims to truth or understanding.

Seeing what this bargain has wrought, a deep-seated reaction is dawning against the vast symbolic enterprise that weighs us down and invades every part of us. "If we do not 'come to our senses' soon," as David Howes (1991) judged, "we will have permanently forfeited the chance of constructing any meaningful alternatives to the pseudo-existence which passes for life in our current 'Civilization of the Image.'" The task of critique may be, most centrally, to help us see what it will take to reach a place in which we are truly present to each other and to the world.

The first separation seems to have been the sense of time which brings a loss of being present to ourselves. The growth of this sense is all but indistinguishable from that of alienation itself. If, as Lévi-Strauss put it, "the characteristic feature of the savage mind is its timelessness," living in the here and now becomes lost through the mediation of cultural interventions. Presentness is deferred by the symbolic, and this refusal of the contingent instant is the birth of time. We fall under the spell of what Eliade called the "terror of history" as representations effectively oppose the pull of immediate perceptual experience.

Mircea Eliade's Myth of the Eternal Return (1954) stresses the fear that all primitive societies have had of history, the passing of time. On the other hand, voices of civilization have tried to celebrate our immersion in this most basic cultural construct. Leroi-Gourhan (1964), for instance, saw in time orientation "perhaps the human act par excellence." Our perceptions have become so time-governed and time saturated that it is hard to imagine time's general absence: for the same reasons it is so difficult to see, at this point, a non-alienated, non-symbolic, undivided social existence.

History, according to Peterson and Goodall (1993), is marked by an amnesia about where we came from. Their stimulating Visions of Caliban also pointed out that our great forgetting may well have begun with language, the originating device of the symbolic world. Comparative linguist Mary LeCron Foster (1978, 1980) believes that

language is perhaps less than 50,000 years old and arose with the first impulses toward art, ritual and social differentiation. Verbal symbolizing is the principal means of establishing, defining, and maintaining the cultural world and of structuring our very thinking.

As Hegel said somewhere, to question language is to question being. It is very important, however, to resist such overstatements and see the distinction, for one thing, between the cultural importance of language and its inherent limitations. To hold that we and the world are but linguistic creations is just another way of saying how pervasive and controlling is symbolic culture. But Hegel's claim goes much too far, and George Herbert Mead's assertion (1934) that to have a mind one must have a language is similarly hyperbolic and false.

Language transforms meaning and communication but is not synonymous with them. Thought, as Vendler (1967) understood, is essentially independent of language. Studies of patients and others lacking all aspects of speech and language demonstrate that the intellect remains powerful even in the absence of those elements (Lecours and Joanette 1980; Donald 1991). The claim that language greatly facilitates thought is likewise questionable, inasmuch as formal experiments with children and adults have not demonstrated it (G. Cohen 1977). Language is clearly not a necessary condition for thinking (see Kertesz 1988, Jansons 1988).

Verbal communication is part of the movement away from a face-to-face social reality, making feasible physical separateness. The word always stands between people who wish to connect with each other, facilitating the diminution of what need not be spoken to be said. That we have declined from a non-linguistic state begins to appear a sane point of view. This intuition may lie behind George W. Morgan's 1968 judgment that "Nothing, indeed, is more subject to depreciation and suspicion in our disenchanted world than the word."

Communication outside civilization involved all the senses, a condition linked to the key gatherer-hunter traits of openness and sharing. Literacy ushered us into the society of divided and reduced senses, and we take this sensory deprivation for granted as if it were a natural state, just as we take literacy for granted.

Culture and technology exist because of language. Many have seen speech, in turn, as a means of coordinating labor, that is, as an essential part of the technique of production. Language is critical for the formation of the rules of work and exchange accompanying division of labor, with the specializations and standardizations of nascent economy paralleling those of language. Now guided by symbolization, a new kind of thinking takes over, which realizes itself in culture and technology. The interdependence of language and technology is at least as obvious as that of language and culture, and results in an accelerating mastery over the natural world intrinsically similar to the control introduced

over the once autonomous and sensuous individual.

Noam Chomsky, chief language theorist, commits a grave and reactionary error by portraying language as a "natural" aspect of "essential human nature," innate and independent of culture (1966b, 1992). His Cartesian perspective sees the mind as an abstract machine which is simply destined to turn out strings of symbols and manipulate them. Concepts like origins or alienation have no place in this barren techno-schema. Lieberman (1975) provides a concise and fundamental correction: "Human language could have evolved only in relation to the total human condition."

The original sense of the word define is, from Latin, to limit or bring to an end. Language seems often to close an experience, not to help ourselves be open to experience. When we dream, what happens is not expressed in words, just as those in love communicate most deeply without verbal symbolizing. What has been advanced by language that has really advanced the human spirit? In 1976, von Glasersfeld wondered "whether, at some future time, it will still seem so obvious that language has enhanced the survival of life on this planet."

Numerical symbolism is also of fundamental importance to the development of a cultural world. In many primitive societies it was and is considered unlucky to count living creatures, an anti-reification attitude related to the common primitive notion that to name another is to gain power over that person. Counting, like naming, is part of the domestication process. Division of labor lends itself to the quantifiable, as opposed to what is whole in itself, unique, not fragmented. Number is also necessary for the abstraction inherent in the exchange of commodities and is prerequisite to the take-off of science and technology. The urge to measure involves a deformed kind of knowledge that seeks control of its object, not understanding.

The sentiment that "the only way we truly apprehend things is through art" is a commonplace opinion, one which underlines our dependence on symbols and representation. "The fact that originally all art was 'sacred'" (Eliade, 1985), that is, belonging to a separate sphere, testifies to its original status or function

Art is among the earliest forms of ideological and ritual expressiveness, developed along with religious observances designed to hold together a communal life that was beginning to fragment. It was a key means of facilitating social integration and economic differentiation (Dickson, 1990), probably by encoding information to register membership, status, and position (Lumsden and Wilson 1983). Prior to this time, somewhere during the Upper Paleolithic, devices for social cohesion were unnecessary; division of labor, separate roles, and territoriality seem to have been largely non-existent. As tensions and anxieties started to emerge in social life, art and the rest of culture arose with them in answer to their disturbing presence.

Art, like religion, arose from the original sense of disquiet, no doubt subtly but powerfully disturbing in its newness and its encroaching gradualness. In 1900 Hirn wrote of an early dissatisfaction that motivated the artistic search for a "fuller and deeper expression" as "compensation for new deficiencies of life." Cultural solutions, however, do not address the deeper dislocations that cultural "solutions" are themselves part of. Conversely, as commentators as diverse as Henry Miller and Theodor Adorno have concluded, there would be no need of art in a disalienated world. What art has ineffectively striven to capture and express would once again be a reality, the false antidote of culture forgotten.

Art is a language and so, evidently, is ritual, among the earliest cultural and symbolic institutions. Julia Kristeva (1989) commented on "the close relation of grammar to ritual," and Frits Staal's studies of Vedic ritual (1982 1986, 1988) demonstrated to him that syntax can completely explain the form and meaning of ritual. As Chris Knight (1996) noted, speech and ritual are "interdependent aspects of one and the same symbolic domain."

Essential for the breakthrough of the cultural in human affairs, ritual is not only a means of aligning or prescribing emotions; it is also a formalization that is intimately linked with hierarchies and formal rule over individuals. All known tribal societies and early civilizations had hierarchical organizations built on or bound up with a ritual structure and matching conceptual system.

Examples of the link between ritual and inequality, developing even prior to agriculture, are widespread (Gans 1985, Conkey 1984). Rites serve a safety valve function for the discharge of tensions generated by emerging divisions in society and work to create and maintain social cohesion. Earlier on there was no need of devices to unify what was, in a non-division of labor context, still whole and unstratified.

It has often been said that the function of the symbol is to disclose structures of the real that are inaccessible to empirical observation. More to the point, in terms of the processes of culture and civilization, however, is Abner Cohen's contention (1981, 1993) that symbolism and ritual disguise, mystify and sanctify irksome duties and roles and thus make them seem desirable. Or, as David Parkin (1992) put it, the compulsory nature of ritual blunts the natural autonomy of individuals by placing them at the service of authority.

Ostensibly opposed to estrangement, the counter-world of public rites is arrayed against the current of historical direction. But, again, this is a delusion, since ritual facilitates the establishment of the cultural order, bedrock of alienated theory and
practice. Ritual authority structures play an important part in the organization of production (division of labor) and actively further the coming of domestication. Symbolic categories are set up to

control the wild and alien; thus the domination of women proceeds, a development brought to full realization with agriculture, when women become essentially beasts of burden and/or sexual objects. Part of this fundamental shift is movement toward territorialism and warfare; Johnson and Earle (1987) discussed the correspondence between this movement and the increased importance of ceremonialism.

According to James Shreeve (1995), "In the ethnographic record, wherever you get inequality, it is justified by invoking the sacred." Relatedly, all symbolism, says Eliade (1985), was originally religious symbolism. Social inequality seems to be accompanied by subjugation in the non-human sphere. M. Reinach (quoted in Radin, 1927) said, "thanks to magic, man takes the offensive against the objective world." Cassirer (1955) phrased it this way: "Nature yields nothing without ceremonies."

Out of ritual action arose the shaman, who was not only the first specialist because of his or her role in this area, but the first cultural practitioner in general. The earliest art was accomplished by shamans, as they assumed ideological leadership and designed the content of rituals.

This original specialist became the regulator of group emotions, and as the shaman's potency increased, there was a corresponding decrease in the psychic vitality of the rest of the group (Lommel, 1967). Centralized authority, and most likely religion too, grew out of the elevated position of the shaman. The specter of social complexity was incarnated in this individual who wielded symbolic power. Every head man and chief developed from the primacy of this figure in the lives of others in the group.

Religion, like art, contributed to a common symbolic grammar needed by the new social order and its fissures and anxieties. The word is based on the Latin religare, to tie or bind, and a Greek verbal stem denoting attentiveness to ritual, faithfulness to rules. Social integration, required for the first time, is evident as impetus to religion.

It is the answer to insecurities and tensions, promising resolution and transcendence by means of the symbolic. Religion finds no basis for its existence prior to the wrong turn taken toward culture and the civilized (domesticated). The American philosopher George Santayana summed it up well with, " Another world to live in is what we mean by religion."

Since Darwin's Descent of Man (1871) we have understood that human evolution greatly accelerated culturally at a time of insignificant physiological change. Thus symbolic being did not depend on waiting for the right gifts to evolve. We can now see, with Clive Gamble (1994), that intention in human action did not arrive with domestication/agriculture/civilization.

The native denizens of Africa's Kalahari Desert, as studied by Laurens van der Post (1976), lived in "a state of complete trust, dependence and interdependence with nature," which was "far kinder to them than any

civilization ever was." Egalitarianism and sharing were the hallmark qualities of hunter-gatherer life (G. Isaac 1976, Ingold 1987, 1988, Erdal and Whiten 1992, etc.), which is more accurately called gatherer-hunter life, or the foraging mode. In fact, the great bulk of this diet consisted of plant material, and there is no conclusive evidence for hunting at all prior to the Upper Paleolithic (Binford 1984, 1985).

An instructive look at contemporary primitive societies is Colin Turnbull's work (1961, 1965) on pygmies of the Ituri forest and their Bantu neighbors. The pygmies are foragers, living with no religion or culture. They are seen as immoral and ignorant by the agriculturalist Bantu, but enjoy much greater individualism and freedom. To the annoyance of the Bantu, the pygmies irreverently mock the solemn rites of the latter and their sense of sin. Rejecting territorialism, much less private holdings, they "move freely in an uncharted, unsystematized, unbounded social world," according to Mary Douglas (1973).

The vast era prior to the coming of symbolic being is an enormously prominent reality and a question mark to some. Commenting on this "period spanning more than a million years," Tim Ingold (1993) called it "one of the most profound enigmas known to archaeological science." But the longevity of this stable, non-cultural epoch has a simple explanation: as F. Goodman (1988) surmised, "It was such a harmonious existence, and such a successful adaptation, that it did not materially alter for many thousands of years."

Culture triumphed at last with domestication. The scope of life became narrower, more specialized, forcibly divorced from its previous grace and spontaneous liberty. The assault of a symbolic orientation upon the
natural also had immediate outward results. Early rock drawings, found 125 miles from the nearest recorded trickle of water in the Sahara, show people swimming. Elephants were still somewhat common in some coastal Mediterranean zones in 500 B.C., wrote Herodotus. Historian Clive Ponting (1992) has shown that every civilization has diminished the health of its environment.

And cultivation definitely did not provide a higher-quality or more reliable food base (M.N. Cohen 1989, Walker and Shipman 1996), though it did introduce diseases of all kinds, almost completely unknown outside civilization (Burkett 1978, Freund 1982), and sexual inequality (M. Ehrenberg 1989b, A. Getty 1996). Frank Waters' Book of the Hopi (1963) gives us a stunning picture of unchecked division of labor and the poverty of the symbolic: "More and more they traded for things they didn't need, and the more goods they got, the more they wanted. This was very serious. For they did not realize they were drawing away, step by step, from the good life given them."

A pertinent chapter from The Time Before History (1996) by Colin Tudge bears a title that speaks volumes, "The End of Eden: Farming."

Much of an underlying epistemological distinction is revealed in this contrast by Ingold (1993): "In short, whereas for farmers and herdsmen the tool is an instrument of control, for hunters and gatherers it would better be regarded as an instrument of revelation." And Horkheimer (1972) bears quoting, in terms of the psychic cost of domestication/domination of nature: "the destruction of the inner life is the penalty man has to pay for having no respect for any life other than his own." Violence directed outward is at the same time inflicted spiritually, and the outside world becomes transformed, debased, as surely as the perceptual field was subjected to fundamental redefinition. Nature certainly did not ordain civilization; quite the contrary.

Today it is fashionable, if not mandatory, to maintain that culture always was and always will be. Even though it is demonstrably the case that there was an extremely long non-symbolic human era, perhaps one hundred times as long as that of
civilization, and that culture has gained only at the expense of nature, one has it from all sides that the symbolic–like alienation–is eternal. Thus questions of origins and destinations are meaningless. Nothing can be traced further than the semiotic in which everything is trapped.

But the limits of the dominant rationality and the costs of civilization are too starkly visible for us to accept this kind of cop-out. Since the ascendance of the symbolic humans have been trying, through participation in culture, to recover an authenticity we once lived. The constant urge or quest for the transcendent testifies that the hegemony of absence is a cultural constant. As Thomas McFarland (1987) found, "culture primarily witnesses the absence of meaning, not its presence."

Massive, unfulfilling consumption, within the dictates of production and social control, reigns as the chief everyday consolation for this absence of meaning, and culture is certainly itself a prime consumer choice. At base, it is division of labor that ordains our false and disabling symbolic totality. "The increase in specialization...," wrote Peter Lomas (1996), "undermines our confidence in our ordinary capacity to live."

We are caught in the cultural logic of objectification and the objectifying logic of culture, such that those who counsel new ritual and other representational forms as the route to a re-enchanted existence miss the point completely. More of what has failed for so long can hardly be the answer. Lévi-Strauss (1978) referred to "a kind of wisdom [that primitive peoples] practiced spontaneously and the rejection of which, by the modern world, is the real madness."

Either the non-symbolizing health that once obtained, in all its dimensions, or madness and death. Culture has led us to betray our own aboriginal spirit and wholeness, into an ever-worsening realm of synthetic, isolating, impoverished estrangement. Which is not to say that there are no more everyday pleasures, without which we would lose our humanness. But as our plight deepens, we glimpse how much must be

erased for our redemption.

BEGINNING OF TIME, END OF TIME

Just as today's most obsessive notion is that of the material reality of time, self-existent time was the first lie of social life. As with nature, time did not exist before the individual became separate from it. Reification of this magnitude––the beginning of time––constitutes the Fall: the initiation of alienation, of history. 65

Spengler observed that one culture is differentiated from another by the intuitive meanings assigned to time,[1] Canetti that the regulation of time is the primary attribute of all government.[2] But the very movement from community to civilization is also predicated there. It is the fundamental language of technology and the spirit of domination.

Today the feverish acceleration of time, as well as the failure of the "solution" of spatializing it, is exposing it as an artificial, oppressive force along with its corollaries, progress and Becoming. More concretely, technology and work are being revealed by the palpable thrall of time. Either way, the pressure to dissolve history and the rule of time hasn't been so strong since the Middle Ages, before that, since the Neolithic revolution establishing agriculture.

When the humanization of technology and work appear as dubious propositions, the humanization of time itself is also called into question. The questions forming are, how can basic oppressions be effectively controlled or reformed? Why not abolished?

Quoting Hegel approvingly, Debord wrote, "Man, 'the negative being who *is* only to the extent that he suppresses Being,' is identical to time."[3] This equation is being refused, a situation perhaps best illumined by looking at the origins, evolution and present status of time.

If "all reification is forgetting,"[4] in Horkheimer and Adorno's pregnant phrase, it seems equally true that all "forgetting"––in the sense of loss of contact with our time-less beginnings, of constant "falling into time"––is a reification. All the other reifications, in fact, follow this one.[5]

It may be due to the huge implications involved that no one has satisfactorily defined the objectification called time and its course. From time, into history, through progress, and so to the murderous idolatry of the future, which now kills species, languages, cultures, and possibly the

entire natural world. This essay should go no further without declaring an intent and strategy: technological society can only be dissolved (and prevented from recycling) by annulling time and history.

"History is eternal becoming and therefore eternal future; Nature is become and therefore eternally past,"[6] as Spengler put it. This movement is also well captured by Marcuse's "History is the negation of Nature,"[7] the increasing speed of which has carried man quite outside of himself. At the heart of the process is the reigning concept of temporality itself, which was unknown in early humans.

Lévy-Bruhl provides an introduction: "Our idea of time seems to be a natural attribute of the human mind. But that is a delusion. Such an idea scarcely exists where primitive mentality is concerned ... "[8] The Frankforts concluded that primeval thought "does not know time as uniform duration or as a succession of qualitatively indifferent moments."[9] Rather, early individuals "lived in a stream of inner and outer experience which brought along a different cluster of coexisting events at every moment, and thus constantly changed, quantitatively and qualitatively."[10]

Meditating on the skull of a plains hunter-gatherer woman, Jacquetta Hawks could imagine the "eternal present in which all days, all the seasons of the plain stand in an enduring unity."[11] In fact, life was lived in a continuous present,[12] underlying the point that historical time is not inherent in reality, but an imposition on it. The concept of time itself as an abstract, continuing "thread," unraveling in an endless progression that links all events together while remaining independent of them was completely unknown.

Henri-Charles Puesch's term "articulated atemporality" is a useful one, which reflects the fact that awareness of intervals, for instance, existed with the absence of an explicit sense of time. The relationship of subject to object was radically different, clearly, before temporal distance intruded into the psyche. Perception was not the detached act we know now, involving the distance that allows an externalization and domination of nature.

Of course, we can see the reflections of this original condition in surviving tribal peoples, in varying degrees. Wax said of the nineteenth century Pawnee Indians, "Life had a rhythm but not a progression."[13] The Hopi language employs no references to past, present or future. Further in the direction of history, time is explicit in Tiv thought and speech, but it is not a category of it, just as another African group, the Nuer, have no concept of time as a separate idea. The fall into time is a gradual one; just as the early Egyptians kept two clocks, measuring everyday cycles and uniform "objective" time, the Balinese calendar "doesn't tell what time it is, but rather what kind of time it is."[14]

In terms of the original, hunter-gatherer humanity[15] generally referred to above, a few words may be in order, especially inasmuch as there has been a "nearly complete reversal in anthropological orthodoxy"[16] concerning it since the end of the 1960s. Life prior to the earliest agricultural societies of about 10,000 years ago had been seen as nasty, short and brutish, but the research of Marshall Sahlins, Richard Lee and others has changed this view very drastically. Foraging now represents the original affluent society in that it provided life and social pleasures with a minimum of effort; work was regarded strictly as a social cost and the spirit of the gift predominated.[17]

This, then, was the basis of no-time, bringing to mind Whitrow's remarks that "Primitives live in a now, as we all do when we are having fun."[18] And Nietzsche's that "All pleasure desires eternity––deep, deep eternity."

The idea of an original state of pleasure and perfection is very old and virtually universal.[19] The memory of a "lost Paradise"––and often an accompanying eschatology that demands the destruction of subsequent existence––is seen in the Taoist idea of a Golden Age, the Cronia and Saturnalia of Rome, the Greeks' Elysium, and the Christian Garden of Eden and the Fall (probably deriving from the Sumerian laments for lost happiness in lordless society), to name but a few. The loss of a paradisal situation with the dawn of time reveals time as the curse of the Fall, history seen as a consequence of Original Sin. Norman O. Brown felt that "Separateness, then is the Fall––the fall into division, the original lie."[20] Walter Benjamin held that "the origin of abstraction ... is to be sought in the Fall."[21] Conversely, Eliade discerned in the shamanic experience a "nostalgia for paradise," in exploring the belief that "what the shaman can do today *in ecstasy*" could, prior to the hegemony of time, "be done by all human beings *in concreto*."[22] Small wonder that Loren Eisely saw in aboriginal people "remarkably effective efforts to erase or ignore all that is not involved with the transcendent search for timelessness, the happy land of no change,"[23] or that Lévi-Strauss found primitive societies determined to "resist desperately any modification in their structure that would enable history to burst forth into their midst.."[24]

If all this seems a bit too heady for such a sober topic as time, a few modern clichés may give pause as to where an absence of wisdom really lies. John G. Gunnell tells us that "Time is a form of ordering experience,"[25] an exact parallel to the equally fallacious assertion of the neutrality of technology. Even more extreme in its fealty to time is Clark and Piggott's bizarre claim that "human societies differ from animal ones, in the final resort, through their consciousness of history."[26] Erich Kahler has it that "Since primitive peoples have scarcely any feeling for individuality, they have not individual property,"[27] a notion

as totally wrong as Leslie Paul's "In stepping out of nature, man makes himself free of the dimension of time."[28] Kahler, it might be added, is on vastly firmer ground in noting that the early individual's "primitive participation with his universe and with his community begins to disintegrate" with the acquiring of time."[29] Seidenberg also detected this loss, in which our ancestor "found himself diverging ever further from his instinctual harmony along a precarious path of unstable synthesis. And that path is history."[30]

Coming back to the mythic dimension, as in the generalized ancient memory of an original Eden––the reality of which was hunter-gatherer life––we confront the magical practices found in all races and early societies. What is seen here, as opposed to the timebound mode of technology, is an atemporal intervention aimed at the "reinstatement of the usual uniformities of nature."[31] It is this primary human interest in the regularity, not the supersession, of the processes of nature that bears emphasizing. Related to magic is totemism, in which the kinship of all living things is paramount; with magic and its totemic context, participation with nature underlies all.

"In pure totemism," says Frazer, "...the totem [ancestor, patron] is never a god and is never worshipped."[32] The step from participation to religion, from communion with the world to externalized deities for worship, is a part of the alienation process of emerging time. Ratschow held the rise of historical consciousness responsible for the collapse of magic and its replacement by religion,[33] an essential connection. In much the same sense, then, did Durkheim consider time to be a "product of religious thought."[34] Eliade saw this gathering separation and related it to social life: "the most extravagant myths and rituals, Gods and Goddesses of the most various kinds, the Ancestors, masks and secret societies, temples, priesthoods, and so on––all this is found in cultures that have passed beyond the stage of gathering and small-game hunting..."[35]

Elman Service found the band societies of the hunter-gatherer stage to have been "surprisingly" egalitarian and marked by the absence not only of authoritarian chiefs, but of specialists, intermediaries of any kind, division of labor, and classes.[36] Civilization, as Freud repeatedly pointed out, with alienation at its core, had to break the early hold of timeless and non-productive gratification.[37]

In that long, original epoch, alienation first began to appear in the shape of time, although many tens of thousands of years' resistance stayed its definitive victory, its conversion into history. Spatialization, which is the motor of technology, can be traced back to the earliest sad experiences of deprivation through time, back to the beginning efforts to offset the passage to time by extension in space. The injunction in

Genesis to "Be fruitful and multiply" was seen by Cioran as "criminal."[38] Possibly he could see in it the first spatialization––that of humans themselves––for division of labor and the other ensuing separations may be said to stem from the large growth of human numbers, with the progressive breakdown of hunter-gatherer life. The bourgeois way of stating this is the cliché that domination (rulers, cities, the state, etc.) was the natural outcome of "population pressures."

In the movement from the hunter-gatherer to the nomad we see spatialization in the form, at about 1200 B.C., of the war chariot (and the centaur) figure. The intoxication with space and speed, as compensation for controlling time, is obviously with us yet. It is a kind of sublimation; the anxious energy of the sense of time is converted toward domination spatially, most simply.

With the end of a nomadic existence, the social order is created on a basis of fixed property,[39] a further spatialization. Here enters Euclid, whose geometry reflects the needs of the early agricultural systems and which established science on the wrong track by taking space as the primary concept.

In attempting a typology of the egalitarian society, Morton Fried declared that it had no regular division of labor (and thus no political power accrued therefrom) and that "Almost all of these societies are founded upon hunting and gathering and lack significant harvest periods when large reserves of food are stored."[40] Agricultural civilization changed all of this, introducing production via the development of surplus and specialization. Supported by surplus, the priest measured time, traced celestial movement, and predicted future events. Time, controlled by a powerful elite, was used directly to control the lives of great numbers of men and women.[41] The masters of the early calendars and their attendant lore "became a separate priestly caste,"[42] according to Lawrence Wright. A prime example was the very time-obsessed Mayans; G.J. Whitrow tells us that "of all ancient peoples, the Mayan priests developed the most elaborate and accurate astronomical calendar, and thereby gained enormous influence over the masses."[43]

Generally speaking, Henry Elmer Barnes is quite correct that formal time concepts came with the development of agriculture.[44] One is reminded here of the famous Old Testament curse of agriculture (Genesis 3:17-18) at the expulsion from Paradise, which announces work and domination. With the advance of farming culture the idea of time became more defined and conceptual, and differences in the interpretation of time constituted a demarcation line between a state of nature and one of civilization, between the educated classes and the masses.[45] It is recognized as a defining mode of the new Neolithic phenomena, as expressed by Nilsson's comment that "ancient civilized

peoples appear in history with a fully-developed system of time-reckoning,"[46] and by Thompson's that "the form of the calendar is basic to the form of a civilization."[47]

The Babylonians gave the day 12 hours, the Hebrews gave the week 7 days, and the early notion of cyclical time, with its partial claim to a return to the beginnings, gradually succumbed to time as a linear progression. Time and domestication of nature advanced, at a price unrivaled. "The discovery of agriculture," as Eliade claimed, "provoked upheavals and spiritual breakdowns whose magnitude the modern mind finds it well-nigh impossible to conceive."[48] A world fell before this virulent partnership, but not without a vast struggle. So with Jacob Burkhardt we must approach history "as it were as a pathologist"; with Holderlin we still seek to know "How did it begin? Who brought the curse?"

Resuming the narrative, even up to Greek civilization did resistance flourish. In fact, even with Socrates and Plato and the primacy of systematic philosophy, was time at least held at bay, precisely because "forgetting" timeless beginnings was still regarded as the chief obstacle to wisdom or salvation.[49] J.B. Bury's classic *The Idea of Progress* pointed out the "Widely-spread belief" in Greece that the human race had decidedly degenerated from an initial "golden age of simplicity"[50]––a long-standing bar to the progress of the idea of progress. Christianson found the anti-progress attitude later yet: "The Romans, no less than the Greeks and Babylonians, also clung to various notions of cyclical recurrence in time...."[51]

With Judaism and Christianity, however, time very clearly sharpened itself into a linear progression. Here was a radical departure, as the urgency of time seized upon humanity. Its standard features were outlined by Augustine, not coincidentally at one of the most catastrophic moments of history––the collapse of the ancient world and the fall of Rome.[52] Augustine definitely attacked cyclical time, portraying a unitary mankind that advances irreversibly through time; appearing at about 400 A.D., it is the first notable theory of history.

As if to emphasize the Christian stamp on triumphant linear time, one soon finds, in feudal Europe, the first instance of daily life ruled by a strict time-table: the monastery.[53] Ruled like a clock, organized and absolute, the monastery confined the individual in time just as its walls confined him in space. The Church was the first power to conjoin the measurement of time and a temporally ordered mode of life, a project it pursued vigorously. The invention of the striking and wheeled clock by Pope Sylvester II, in the year 1000, is thus quite fitting.[54] The Benedictine order, in particular, has been seen by Coulton, Sombart, Mumford and others as perhaps the original founder of

modern capitalism. The Benedictines, who ruled 40,000 monasteries at their height, helped crucially to yoke human endeavor to the regular, collective beat and rhythm of the machine, reminding us that the clock is not merely a means of keeping track of the hours, but of synchronizing human action.[55]

In the Middle Ages, specifically the 14th century, the march of time met a resistance unequaled in scope, quite possibly, since the Neolithic revolution of agriculture. This claim can be assessed by a comparison of the very basic developments of time and social revolt, which seems to indicate a definite and profound collision of the two.

With the 1300s, quantified, official time stakes its claim to the colonization of modern life; time then became fully abstracted into a uniform series of units, points and sections. The technology of the verge escapement early in the century produced the first modern mechanical clock, symbol of a qualitatively new era of confinement now dawning as temporal associations became completely separate from nature. Public clocks appear, and around 1345 the division of hours into sixty minutes and of minutes into sixty seconds became common,[56] among other new conventions and usages across Europe. The new exactitude carried a tighter synchronization forward, essential to a new level of domestication. Glasser remarked on the "loss of poetry and immediacy in personal experience" caused by time's new power, and reflected that this manifestation of time replaced the movement and radiance of the day by its utilization as a temporal unit.[57] Days, hours, and minutes became interchangeable like the standardized parts and work processes they prefigured.

These decisive and oppressive changes may have been at the heart of the great social revolts that coincided with them. Textile workers, peasants, and city poor shook the norms and barriers of society to the point of dissolution, in risings such as that of Flanders between 1323 and 1328, the French *Jacquerie* of 1358, and the English revolt of 1381, to name only the three most prominent. The millennial character of revolutionary insurgence at this time, which in Bohemia and Germany existed even into the early 16th century, underlines the unmistakable time element and recalls earlier examples of longing for an original, unmediated condition. The mystical anarchism of the Free Spirit in England sought the state of nature, for example, as did the famous proverb stressed by the rebel John Ball: "When Adam delved and Eve span, who then was a gentleman?" Very instructive is a meditation of the radical mystic Suso, of Cologne, in about 1330:

> " 'Whence have you come?' The image (appearing to Suso) answers 'I come from nowhere.' 'Tell me, what are you?' 'I am not.' 'What do you wish?' 'I do not wish.' 'This is a miracle!

> Tell me, what is your name?' 'I am called Nameless Wildness.' 'Where does your insight lead to?' To untrammeled freedom.' 'Tell me, what do you call untrammeled freedom?' 'When a man lives according to all his caprices without distinguishing between God and himself, and without looking before or after.'"[58]

The desire "to hold all things in common," to abolish rank and hierarchy, and, even more so, Suso's explicitly anti-time utterance, reveal the most extreme desires of the 14th century social revolt and demonstrate its element of time refusal.[59]

This watershed in the late medieval period can also be understood via art, where the measured space of perspective followed the measured time of the clocks. Before the 14th century there was no attempt at perspective because the painter attempted to record things as they are, not as they look. After the 14th century, an acute time sense informs art; "Not so much a place as a moment is fixed for us, and a fleeting moment: a point of view in time more than in space,"[60] as Bronowski described it. Similarly, Yi-Fu Tuan pointed out that the landscape picture, which appeared only with the 15th century, represented a major re-ordering of time as well as space with its perspective.[61]

Motion is stressed by perspective's transformation of the similarity of space into a happening in time, which, returning to the theme of spatialization, shows in another way that a "quantum leap" in time had occurred. Movement again became a source of values following the defeat of the 14th century resistance to time; a new level of spatialization was involved, as seen most clearly in the emergence of the modern map, in the 15th century, and the ensuing age of the great voyages. Braudel's phrase, modern civilization's "war against empty space,"[62] is best understood in this light.

"The new valuation of Time, which then broke to the surface, actually became one of the most powerful agencies by which Western thought, at the end of the Middle Ages, was transformed ..."[63] was Kantorowicz's way of expressing the new, strengthened hegemony of time. If in this objective temporal order of official, legal, factual time only the spatial found the possibility of real expression, all thinking would be necessarily shifted, and also brought to heel. A good deal of this reorientation can be found in Le Goff's simple observation concerning the early 15th century, that "the first virtue of the humanist is a sense of time."[64]

How else could modernity be achieved but by the new dimensions reached by time and technology together, their distinctive and perfected mating? Lilley noted that "the most complex machines produced by the Middle Ages were mechanical clocks,"[65] just as Mumford saw that "the clock, not the steam engine, is the key machine of the modern industrial age."[66] Marx too found here the first basis of machine industry: "The

clock is the first automatic machine applied to practical purposes, and the whole theory of production of regular motion was developed on it."[67] Another telling congruence is the fact that, in the mid-15th century, the first document known to have been printed on Gutenberg's press was a calendar (not a bible). And it is noteworthy that the end of the millenarian revolt, such as that of the Taborites of Bohemia in the 15th century and the Anabaptists of Munster in the early 16th century, coincided with the perfection and spread of the mechanical clock. In Peter Breughel's *The Triumph of Time* (1574), the many objects and ideas of the painting are dominated by the figure of a modern clock.

This triumph, as noted above, awakened a great spatial urge by way of compensation: circumnavigating the globe and the discovery, suddenly, of vast new lands, for example. But just as certain is its relationship to "the progressive disrealization of the world,"[68] in the words of Charles Newman, which began at this time. Extension, in the form of domination, obviously accentuated alienation from the world: a totally fitting accompaniment to the dawning of modern history.

Official time had become a barrier both palpable and all- pervasive, filtering and distorting what people said to each other. As of this time, it unmistakably imposed a new distance on human relations and restraint on emotional responses. A Renaissance hallmark, the search for rare manuscripts and classical antiquities, is one form of longing to withstand this powerful time. But the battle had been decided, and abstract time had become the milieu, the new framework of existence. When Ellul opined that "the whole structure of being" was now permeated by "mechanical abstraction and rigidity," he referred most centrally to the time dimension.

All this bloomed in the 1600s, from Bacon, who first proclaimed modernity's domination of nature, and Descartes' formulation regarding the *maitres et possesseurs de la nature*, which "predicted the imperialistic control of nature which characterizes modern science,"[69] including Galileo and the whole ensemble of the century's scientific revolution. Life and nature became mere quantity, the unique lost its strength, and soon the Newtonian image of the world as a clock-like mechanism prevailed. Equivalence––with uniform time as its real model––came to rule, in a development that made "the dissimilar comparable by reducing it to abstract quantities."[70]

The poet Ciro di Pers understood that the clock made time scarce and life short. To him it

> "Speeds on the course of the fleeing century,
> And to make it open up,
> Knocks every hour at the tomb."[71]

Later in the 17th century, Milton's *Paradise Lost* sides with victorious

time, to the point of denigrating the timeless, paradisical state:

"...with labour I must earn
My bread; what harm?
Idleness had been worse."[72]

Well before the beginnings of industrial capitalism, then, had time substantially subdued and synchronized life. Advancing technology can be said to have been borne by the earlier breakthroughs of time. "It was the beginning of modern time that made the speed of technology possible,"[73] concluded Octavio Paz. E.P. Thompson's widely-known "Time, Work-Discipline, and Industrial Capitalism"[74] described the industrialization of time, but, more fundamentally, it was time that did the industrializing, the great daily life struggles of the late 18th and early 19th centuries against the factory system[75] notwithstanding.

In terms of the modern era, again one can discern in social revolts the definite aspect of time refusal, however inchoate. In the very late 19th century, for instance, the context of two revolutions, one must judge, helped Kant see that space and time are not part of the empirical world but part of our acquired intersubjective faculties. It is an non-revolutionary twist that a new, short-lived, calendar was introduced by the French Revolution––not resistance to time, but its renewal under new management![76] Walter Benjamin wrote of actual time refusal during the July revolution of 1830, noting the fact that in early fighting "the clocks in towers were being fired on simultaneously and independently from several places in Paris." He quoted an eyewitness: "Who would have believed? We are told that new Joshuas at the foot of every tower, as though irritated with time itself, fired at the dials in order to stop the day.[77]

Not that moments of insurgence are the only occasions of sensitivity to time's tyranny. According to Poulet, no one felt more grievously the metamorphosis of time into something quite infernal than did Baudelaire, who wrote of the malcontents "who have refused redemption by work," who wanted "to possess immediately, on this earth, a Paradise"; these he termed "Slaves martyred by Time,"[78] a notion echoed by Rimbaud's denunciation of the scandal of an existence in time. These two poets suffered in the long, dark night of capital's mid- and late-19th century ascendancy, though it could be argued that their awareness of time was made clearest via their active participation, respectively, in the 1848 revolution and the Commune of 1871.

Samuel Butler's utopian *Erewhon* portrayed workers who destroyed their machines lest their machines destroy them. Its opening theme derives from the incident of wearing a watch, and later a visitor's watch is rather forcibly retired to a museum of bygone evils. Very much in this spirit, and from the same era, are these lines of Robert Louis Stevenson:

> "You may dally as long as you like by the roadside. It is almost as if the millennium were arrived, when we shall throw our clocks and watches over the housetop, and remember time and seasons no more. Not to keep hours for a lifetime is, I was going to say, to live forever. You have no idea, unless you have tried it, how endlessly long is a summer's day, that you measure only by hunger, and bring to an end only when you are drowsy."[79]

Referring to such phenomena as huge political rallies, Benjamin's "The Work of Art in the Age of Mechanical Reproduction" made the point that "Mass reproduction is aided especially by the reproduction of masses ..."[80] But one could go much further and say simply that mass reproduction *is* the reproduction of masses, or the mass-man. Mass production itself with its standardized, interchangeable parts and wage-labor to match constitutes a fascism of everyday life long predating the fascist rallies Benjamin had in mind. And, as described above, it was time, several hundred years before that, which provided the categorical paradigm to mass production, in the form of uniform but discrete quanta ordering life.

Stewart Ewen held that during the 19th and early 20th centuries, "the industrial definition of social time and space stood at the core of social unrest,"[81] and this is certainly true; however, the breadth of the time and space "issue" requires a rather broad historical perspective to allow for a comprehension of
modernity's unfolding mass age.

That the years immediately preceding World War I expressed a rising radical challenge requiring the fearful carnage of the war to divert and destroy it is a thesis I have argued elsewhere.[82] The depth of this challenge can best be plumbed in terms of the refusal of time. The contemporary tension between the domains of being and of time was first elucidated by Bergson in the pre-war period in his protest against the fragmentary and repressive character of mechanistic time.[83] With his distrust of science, Bergson argued that a qualitative sense of time, of lived experience or *durée*, requires a resistance to formalized, spatialized time. Though limited, his outlook announced the renewal of a developing opposition to a tyranny that had come to inform so many elements of subjugation.

Most of this century's anti-time impulse was rather fully articulated in the quickening movement just prior to the war. Cubism's urgent re-examination of appearances belongs here, of course; by smashing visual perspective, which had prevailed since the early Renaissance, the Cubists sought to apprehend reality as it was, not as it looked at a moment of time. It is this which enabled John Berger to judge that "the Cubist formula presupposed ... for the first time in history, man living

unalienated from nature."[84] Einstein and Minkowski also bespoke the time revolt context with the well-known scrapping of the Newtonian universe based on absolute time and space. In music, Arnold Schönberg liberated dissonance from the prevailing false positivity's restraints, and Stravinsky explicitly attacked temporal limitations in a variety of new ways, as did Proust, Joyce,[85] and others in literature. All modes of expression, according to Donald Lowe, "rejected the linear perspective of visuality and Archimedean reason, in that crucial decade of 1905-1915!"[86]

In the 1920s Heidegger emphasized time as the central concept for contemporary metaphysics and as forming the essential structure of subjectivity. But the devastating impact of the war had deeply altered the sense of possibilities within social reality. *Being and Time* (1927), in fact, far from questioning time, surrendered to it completely as the only vantage that allows understanding of being. Related, in the parallel provided by Adorno, is "the trick of military command, which dressed up imperative in the guise of a predicative sentence ... Heidegger, too, cracks the whip when he italicizes the auxiliary verb in the sentence, "Death *is*."[87]

Indeed, for almost forty years after World War I the anti-time spirit was essentially suppressed. By the 1930s, one could still find signs of it in, say, the Surrealist movement, or novels of Aldous Huxley,[88] but predominant was the renewed rush of technology and domination, as reflected by Katayev's Five-Year-Plan novel *Time, Forward!* or the bestial deformation expressed in the literally millenarian symbol, the Thousand Year Reich.

Nearer to our contemporary situation, a restive awareness of time began to re-emerge as a new round of contestation neared. In the mid-1950s the scientist N.J. Berrill interrupted a fairly dispassionate book to comment on the predominant desire in society "to get from nowhere to nowhere in nothing flat," observing, "And still a minute can embrace eternity and a month be empty of meaning." Still more startling, he cried out that "For a long time I have felt trapped in time, like a prisoner searching for some sense of escape."[89] Perhaps an unlikely quarter from which to hear such an articulation, but another man of science made a similar statement forty years before, just as World War I was about to quell insurgence for decades; Wittgenstein noted, "Only a man who lives not in time but in the present is happy."[90]

Children, of course, live in a now and want their gratification now, if we are looking for subjects for the idea that only the present can be total. Alienation in time, the beginning of time as an alien "thing," begins in early infancy, as early as the maternity ward, though Joost Meerloo is correct that "With every trauma in life, every new separation, the

awareness of time grows."[91] Raoul Vaneigem supplied the conscious element, outlining perfectly the function of schooling: "The child's days escape adult time; their time is swollen by subjectivity, passion, dreams haunted by reality. Outside, the educators look on, waiting, watch in hand, till the child joins and fits the cycle of the hours."[92] The levels of conditioning reflect, of course, the dimensions of a world so emptied, so exquisitely alienated that time has completely robbed us of the present.. "Every passing second drags me from the moment that was to the moment that will be. Every second spirits me away from myself; now never exists."[93]

The repetitious, routine nature of industrial life is the obvious product of time and technology.[94] An important aspect of time-less hunter-gatherer life was the unique, sporadic quality of its activities, rather than the repetitive;[95] numbers and time apply to the quantitative, not the qualitative. In this regard Richard Schlegel judged that if events were always novel, not only would order and routine be impossible, but so would notions of time itself.[96]

In Beckett's play, *Waiting for Godot*, the two main characters receive a visitor, after which one of them sighs, "Well, at least it helped to pass the time." The other replies, "Nonsense, time would have passed anyway."[97] In this prosaic exchange the basic horror of modern life is plumbed. The meta-presence of time is by this time felt as a heavily oppressive force, standing over its subjects quite autonomously. Very apropos is this summing up by George Morgan: "A fretful busyness to 'kill time' and restless movement from novelty to novelty bury an ever- present sense of futility and vacuousness. In the midst of his endless achievements, modern man is losing the substance of human life."[98]

Loren Eisely once described "a feeling of inexplicable terror," as if he and his companion, who were examining a skull, were in the path of "a torrent that was sweeping everything to destruction." Understanding Eisely's sensation completely, his friend paraphrased him as saying, "to know time is to fear it, and to know civilized time is to be terror-stricken."[99] Given the history of time and our present plight in it, it would be hard to imagine a more prescient bit of communication.

In the 1960s Robert Lowell gave succinct expression to the extremity of the alienation of time:

> I am learning to live in history.
> What is history? What you cannot touch.[100]

Fortunately, also in the '60s, many others were beginning the *un*learning of how to live in history, as evidenced by the shedding of wristwatches, the use of psychedelic drugs, and paradoxically perhaps, by the popular single-word slogan of the French insurrectionaries of May 1968––"Quick!" The element of time refusal in the revolt of the

60s was strong and there are signs––such as the revolt against work––that it continues to deepen even as it contends with extreme new spatializations of time.

Since Marcuse wrote of "the alliance between time and the order of repression,"[101] and Norman O. Brown on the sense of time or history as a function of repression,[102] the vividness of the connection has powerfully grown.

Christopher Lasch, in the late '70s, noticed that "A profound shift in our sense of time has transformed work habits, values, and the definition of success."[103] And if work is being refused as a key component of time, it is also becoming obvious how consumption gobbles up time alive. Today's perfect spatial symbol of the latter is the Pac-Man video game figure, which literally eats up space to kill time.[104]

As with Aldous Huxley's Mr. Propter, millions have come to find time "a thing intrinsically nightmarish."[105] A fixation with age and the pro-longevity movement, as discussed by Lasch and others, are two signs of its torment. Adorno once said, "As the subjects live less, death grows more precipitous, more terrifying."[106] There seems to be a new generation among the young virtually every three or four years, as time, growing more palpable, has accelerated since the '60s. Science has provided a popular reflection of time resistance in at least two phenomena; the widespread appeal of anti-time concepts more or less loosely derived from physical theory, such as black holes, time warps, space-time singularities and the like, and the comforting appeal of the "deep time" of the so-called geological romances, such as John McPhee's *Basin and Range* (1981).

When Benjamin assayed that "The concept of the historical progress of mankind cannot be sundered from the concept of its progression through a homogenous time,"[107] he called for a critique of both, little realizing how resonant this call might someday become. Still less, of course, could Goethe's dictum that "No man can judge history but one who has himself experienced history"[108] have been foreseen to apply in such a wholesale way as it does now, with time the most real and onerous dimension. The project of annulling time and history will have to be developed as the only hope of human liberation.

Of course, there is no dearth of the wise who continue to assert that consciousness itself is impossible without time and its spatialization,[109] overlooking somehow an overwhelmingly massive period of humanity's existence. Some concluding words from William Morris's *News from Nowhere* are a fitting hope in reply to such sages of domination: "in spite of all the infallible maxims of your day there is yet a time of rest in store for the world, when mastery has changed into fellowship."[110]

ENDNOTES

1. Oswald Spengler, *The Decline of the West*, vol.1 (New York, 1926), p. 131.
2. Elias Canetti, *Crowds and Power* (New York, 1962), p. 397.
3. Guy Debord, *Society of the Spectacle* (Detroit, 1977), thesis 125.
4, Max Horheimer and Theodor W. Adorno, *Dialektik der Aufklarung* (Amsterdam, 1947), p. 274.
5, Cioran, not mention a host of anthropologists, makes this confusion; it is one reason he could say, "There is no going back to a pre-linguistic paradise, to a supremacy over time based upon some primordial stupidity." E.M. Cioran, *The Fall Into Time* (Chicago, 1970), p. 29. Another reason is the failure to imagine this "going back" as necessarily a social transformation on the order of the most basic "revolution."
6. Spengler, *op. cit.*, p. 390.
7. Herbert Marcuse, *One-Dimensional Man* (Boston, 1964), p. 326.
8. Lucien Lévy-Bruhl, *Primitive Mentality* (New York, 1923), p. 93. Paul Radin's *Primitive Man As Philosopher* (New York, 1927), is, it should be noted, a necessary corrective to Lévy-Bruhl's view of early thought as non-individualted and dominated by "mystic" and "occult" patterns. Radin demonstrated that individuality, self-expression and tolerance mark early humanity.
9. H. and H.A. Frankfort, *The Intellectual Adventure of Ancient Man* (Chicago, 1946), p. 23.
10. Marie-Louise von Franz, *Time: Rhythm and Repose* (London, 1978), p. 5.
11. Jacquetta Hawks, *Man on Earth* (London, 1954), p. 13.
12. John G. Gunnell, *Political Philosophy and Time* (Middletown, CT, 1968), p. 13; Mircea Eliade, *Cosmos and History* (New York, 1959), p. 86.
13. Cited by Thomas J. Cottle and Stephen L. Klineberg, *The Present of Things Future* (New York, 1974), p. 166.
14. *Ibid.*, p. 168.
15. The hunter-gatherer mode occupied more than 99 percent of the span of human life.
16. Eric Alden Smith and Bruce Winterhalder, *Hunter Gatherer Foraging Strategies* (Chicago, 1981), p. 4.
17. See, for example, Marshall Sahlins, *Stone Age Economics* (Chicago, 1972).
18. G.J. Whitrow, *Along the Fourth Dimension* (London, 1972), p. 119.
19. Mircea Eliade, *Myth and Reality* (New York, 1963), p. 51; E.R. Dodds, The Ancient Concept of Progress (Oxford, 1973), p. 3; W.K.C. Guthrie, *In the Beginning* (Ithaca, 1957), p. 69.
20. Norman O. Brown, *Love's Body* (New York, 1966), p. 148.
21. Walter Benjamin, *Illuminations* (New York, 1978), p. 328.
22. Mircea Eliade, *Shamanism* (Princeton, 1964), pp. 508, 486.
23. Loren Eiseley, *The Invisible Pyramid* (New York, 1970), p. 113.
24. Claude Lévy-Strauss, *Structural Anthropology* (New York, 1976), p. 28.
25. Gunnell, *op. cit.*, p. 17.
26. Grahame Clark and Stuart Piggott, *Prehistoric Societies* (New York, 1965), p. 43.
27. Erich Kahler, *Man the Measure* (New York, 1943), p. 39.
28. Leslie Paul, *Nature Into History* (London, 1957), p. 179.
29. Kahler, *op. cit.*, p. 40.

30. Roderick Seidenberg, *Posthistoric Man* (Chapel Hill, 1950), p. 21.
31. Arnold Gehlen, *Man in the Age of Technology* (New York, 1980), p. 13.
32. Cited by Kahler, *op. cit*., p. 44.
33. Cited by Adolph E. Jensen, *Myth and Cult Among Primitive Peoples* (Chicago, 1963), p. 31.
34. Emile Durkheim, *Elementary Forms of Religious Life* (New York, 1965), p. 22.
35. Eliade, *Myth and Reality*, pp. 95-96.
36. Elman Service, *The Hunters* (Englewood Cliffs, NJ, 1966), pp. 80-81.
37. Perhaps especially Sigmund Freud, *Civilization and Its Discontents* (London, 1949).
38. E.M. Cioran, *The New Gods* (New York, 1974), p. 10.
39. Horkheimer and Adorno, op. cit., p. 14.
40. Morton Fried, "Evolution of Social Stratification, " in *Culture in History*, Stanley Diamond, ed. (New York, 1960), p. 715.
41. Gale E. Christianson, *The Wild Abyss* (New York, 1978), p. 20.
42. Lawrence Wright, *Clockwork Man* (New York, 1968), p. 12.
43. G.J. Whitrow, *The Natural Philosophy of Time* (Oxford, 1980), p. 56.
44. Henry Elmer Barnes, *The History of Western Civilization* (New York, 1935), p. 25.
45. Richard Glasser, *Time in French Life and Thought* (Manchester, 1972), p. 6.
46. Marin P. Nilsson, *Primitive Time-Reckoning* (London, 1920), p. 1.
47. William Irwin Thompson, *The Time Falling Bodies Take to Light: Mythology, Sexuality and the Origins of Culture* (New York, 1981), p. 211. Walter Benjamin's well known "There is never a document of civilization which is not at the same time a document of barbarism" could be said to apply first and foremost to the calendar.
48. Mircea Eliade, *The Forge and the Crucible* (New York, 1971), p. 177.
49. There seems to be a striking parallel here to Marcuse's profound valorization of memory (even including an endorsement of the cyclical view of time). See Martin Jay, "Anamnestic Totalization: Reflections on Marcuse's Theory of Remembrance," *Theory & Society*, vol. 11 (1982), no. 1.
50. J.B. Bury, *The Idea of Progress* (New York, 1932), pp. 8-9.
51. Christianson, *op. cit*., p. 86.
52. Nicolas Berdyaev, *The Meaning of History* (London, 1936), p. 1.
53. Wright, *op.cit*., p. 39.
54. Glasser, *op. cit*., p. 54.
55. Lewis Mumford, *Interpretations and Forecasts*, 1922-1972 (New York, 1972), p. 271.
56. Lewis Mumford, *Technics and Civilization* (New York, 1934), p. 16.
57. Glasser, *op. cit*., p. 56.
58. Norman Cohn, *The Pursuit of the Millennium* (Fairlawn, NJ, 1957), p. 186.
59. The celebration of the Feast of Fools, which reached its height in Europe at this time, was a mocking of religious authority. It involved a grotesquely costumed figure representing the higher clergy, led into church seated backwards on an ass with garments inside out, and dancing or reversing the order of the liturgy.
60. Jacob Bronowski, *The Ascent of Man* (Boston, 1974), p. 78.
61. Yi-Fu Tuan, *Space and Place* (Minneapolis, 1977), p. 123.
62. Fernand Braudel, *Capitalism and Material Life, 1400-1800* (London, 1967), p. 60.
63. Ernst Kantorowiscz, *The King's Two Bodies* (Princeton, 1957), p. 274. Gustav Bilfinger, in the 1890s, also understood the change from the medieval to the modern age as a change in the nature of time.
64. Jacques LeGoff, *Time, Work and Culture in the Middle Ages* (Chicago, 1980), p. 51.

65. S. Lilley, Men, *Machines and History* (London, 1948), p. 44.
66. Mumford, *Technics and Civilization*, p. 14.
67. Marx to Engels, January 28, 1863. *The Letters of Karl Marx* (Englewood Cliffs, NJ, 1979), p. 168.
68. Charles Newman, introduction to Cioran, *Fall Into Time*, p. 10
69. Arnold Gehlen, *Man in the Age of Technology* (New York, 1980), p. 94.
70. Horkheimer and Adorno, *op. cit.*, p. 7.
71. Sebastian de Grazia, *Of Time, Work, and Leisure* (New York, 1962), pp. 310-311.
72. John Milton, *Paradise Lost* (Oxford, 1968), x, 1054-1055.
73. Octavio Paz, *Alternating Currents* (New York, 1973), p. 146.
74. E.P. Thompson, "Time, Work-Discipline, and Industrial Capitalism," *Past and Present* #38 (December 1967).
75. For example, John Zerzan, "Industrialism and Domestication," *Fifth Estate*, April 1976.
76. Time re-began for the new republic on September 22, 1792. Year One of the new calendar disclosed that the number of no-work holidays had been cut in half, a radically unpopular idea!
77. Benjamin, *op. cit.*, p. 253.
78. Georges Poulet, *Studies in Human Time* (New York, 1956), p. 273.
79. Robert Louis Stevenson, *Virginibus Puerisque and Other Papers* (New York, 1893), pp. 254-255.
80. Benjamin, *op. cit.*, p. 253.
81. Stuart Ewen, *Captains of Consciousness: Advertising and the Roots of the Consumer Culture* (New York, 1976), p. 198.
82. John Zerzan, "Origins and Meaning of World War I," *TELOS* 49 (Fall 1981), pp. 97-116.
83. Raymond Klibansky, "The Philosophic Character of History," in Raymond Klibansky and H.J. Paton, eds., *Philosophy and History: The Ernst Cassirer Festschrift* (New York, 1963), p. 330.
84. John Berger, *Permanent Red* (London, 1960), p. 112.
85. "History is a nightmare from which I am trying to awaken." James Joyce, *Ulysses* (New York, 1961), p. 34.
86. Donald M. Lowe, *History of Bourgeois Perception* (Chicago, 1982), p. 117.
87. Theodor W. Adorno, *The Jargon of Authenticity* (Evanston, IL, 1973), p. 88.
88. For example, Huxley's *After Many a Summer Dies the Swan* (New York, 1939) and *Time Must Have a Stop* (New York, 1944).
89. N.J. Berrill, *Man's Emerging Mind* (New York, 1955), pp. 163-164.
90. Ludwig Wittgenstein, *Notebooks, 1914-1916* (Chicago, 1979), p. 74e.
91. Joost A.M. Meerloo, *The Two Faces of Man* (New York, 1954), p. 23.
92. Raoul Vaneigem, *The Revolution of Everyday Life* (London, 1975), p. 220.
93. *Ibid.*, p. 228.
94. Consider Jacques Ellul, *The Technological System* (New York, 1980) as to whether it is time or technology that "comes first." All of the basic, society-dominating traits he attributes to technology are, more basically, those of time. Perhaps a tell-tale sign that he is still one remove away from the most fundamental level is the spatial character of his conclusion that "technology is the only place where form and being are identical." (p. 231)
95. Service, *op. cit.*, p. 67.
96. Richard Schlegel, *Time and the Physical World* (East Lansing, 1961), p. 16.
97. Samuel Beckett, *Waiting for Godot* (New York, 1954), p. 32.

98. George W. Morgan, *The Human Predicament: Dissolution and Wholeness* (Providence, 1968), p. 41.
99. Loren Eiseley, *op. cit.*, p. 102.
100. Robert Lowell, *Notebook, 1967-68* (New York, 1969), p. 60.
101. Herbert Marcuse, *Eros and Civilization* (New York, 1955), p. 213
102. Norman O. Brown, *Life Against Death* (Middletown, CT, 1959), pp. 95, 103, for example.
103. Christopher Lasch, *The Culture of Narcissism* (New York, 1978), p. 53.
104. Burt Alpert, *Getting Gödel's Goat: A Stoned Jogging Journal Through Hofstadter* (San Francisco, 1982), p. 1.
105. Aldous Huxley, *After Many a Summer Dies the Swan*, p. 117.
106. Theodor W. Adorno, *Negative Dialectics* (New York, 1973), p. 370.
107. Benjamin, *op. cit.*, p. 263.
108. Cited by Spengler, *op. cit.*, p. 103.
109. For example, Julian Jaynes, *The Origin of Consciousness in the Breakdown of the Bicameral Mind* (Boston, 1977), p. 280.
110. William Morris, *News from Nowhere* (London, 1915), p. 278.

TIME AND ITS DISCONTENTS

The dimension of time seems to be attracting great notice, to judge from the number of recent movies that focus on it, such as *Back to the Future*, *Terminator*, *Peggy Sue Got Married*, etc. Stephen Hawking's *A Brief History of Time* (1988) was a best-seller and became, even more surprisingly, a popular film. Remarkable, in addition to the number of books that deal with time, are the larger number which don't, really, but which feature the word in their titles nonetheless, such as Virginia Spate's *The Color of Time: Claude Monet* (1992). Such references have to do, albeit indirectly, with the sudden, panicky awareness of time, the frightening sense of our being tied to it. Time is increasingly a key manifestation of the estrangement and humiliation that characterize modern existence. It illuminates the entire, deformed landscape and will do so ever more harshly until this landscape and all the forces that shape it are changed beyond recognizing.

This contribution to the subject has little to do with time's fascination for film-makers or TV producers, or with the current academic interest in geologic conceptions of time, the history of clock technology and the sociology of time, or with personal observations and counsels on its use. Neither aspects nor excesses of time deserve as much attention as time's inner meaning and logic. For despite the fact that time's perplexing character has become, in John Michon's estimation, "almost an intellectual obsession" (1988), society is plainly incapable of dealing with it.

With time we confront a philosophical enigma, a psychological mystery, and a puzzle of logic. Not surprisingly, considering the massive reification involved, some have doubted its existence since humanity began distinguishing "time itself" from visible and tangible changes in the world. As Michael Ende (1984) put it: "There is in the world a great and yet ordinary secret. All of us are part of it, everyone is aware of it, but very few ever think of it. Most of us just accept it and never wonder over it. This secret is time."

Just what is "time"? Spengler declared that no one should be allowed to ask. The physicist Richard Feynman (1988) answered, "Don't even

ask me. It's just too hard to think about." Empirically as much as in theory, the laboratory is powerless to reveal the flow of time, since no instrument exists that can register its passage. But why do we have such a strong sense that time does pass, ineluctably and in one particular direction, if it really doesn't? Why does this "illusion" have such a hold over us? We might just as well ask why alienation has such a hold over us. The passage of time is intimately familiar, the concept of time mockingly elusive; why should this appear bizarre, in a world whose survival depends on the mystification of its most basic categories?

We have gone along with the substantiation of time so that it seems a fact of nature, a power existing in its own right. The growth of a sense of time—the acceptance of time --is a process of adaptation to an ever more reified world. It is a constructed dimension, the most elemental aspect of culture. Time's inexorable nature provides the ultimate model of domination.

The further we go in time the worse it gets. We inhabit an age of the disintegration of experience, according to Adorno. The pressure of time, like that of its essential progenitor, division of labor, fragments and disperses all before it. Uniformity, equivalence, separation are byproducts of time's harsh force. The intrinsic beauty and meaning of that fragment of the world that is not-yet-culture moves steadily toward annihilation under a single cultures-wide clock. Paul Ricoeur's assertion that "we are not capable of producing a concept of time that is at once cosmological, biological, historical and individual," fails to notice how they are converging.

Concerning this "fiction" that upholds and accompanies all the forms of imprisonment, "the world is filled with propaganda alleging its existence," as Bernard Aaronson (1972) put it so well. "All awareness," wrote the poet Denise Levertov (1974), " is an awareness of time," showing just how deeply alienated we are in time. We have become regimented under its empire, as time and alienation continue to deepen their intrusion, their debasement of everyday life. "Does this mean," as David Carr (1986) asks, "that the 'struggle' of existence is to overcome time itself?" It may be that exactly this is the last enemy to be overcome.

In coming to grips with this ubiquitous yet phantom adversary, it is somewhat easier to say what time is not. It is not synonymous, for fairly obvious reasons, with change. Nor is it sequence, or order of succession. Pavlov's dog, for instance, must have learned that the sound of the bell was *followed* by feeding; how else could it have been conditioned to salivate at that sound? But dogs do not possess time consciousness, so before and after cannot be said to constitute time.

Somewhat related are inadequate attempts to account for our all but inescapable sense of time. The neurologist Gooddy (1988), rather along

the lines of Kant, describes it as one of our "subconscious assumptions about the world." Some have described it, no more helpfully, as a product of the imagination, and the philosopher J.J.C.Smart (1980) decided that it is a feeling that "arises out of metaphysical confusion." McTaggart (1934), F.H. Bradley (1930), and Dummett (1978) have been among 20th century thinkers who have decided against the existence of time because of its logically contradictory features, but it seems fairly plain that the presence of time has far deeper causes than mere mental confusion.

There is nothing even remotely similar to time. It is as unnatural and yet as universal as alienation. Chacalos (1989) points out that the present is a notion just as puzzling and intractable as time itself. What is the present? We know that it is always now; one is confined to it, in an important sense, and can experience no other "part" of time. We speak confidently of other parts, however, which we call "past" and "future." But whereas things that exist in space elsewhere than here continue to exist, things that don't exist now, as Sklar (1992) observes, don't really exist at all.

Time necessarily flows; without its passage there would be no sense of time. Whatever flows, though, flows with respect to time. Time therefore flows with respect to itself, which is meaningless owing to the fact that nothing can flow with respect to itself. No vocabulary is available for the abstract explication of time apart from a vocabulary in which time is already presupposed. What is necessary is to put all the givens into question. Metaphysics, with a narrowness that division of labor has imposed from its inception, is too narrow for such a task.

What causes time to flow, what is it that moves it toward the future? Whatever it is, it must be beyond our time, deeper and more powerful. It must depend as Conly (1975) had it, "upon elemental forces which are continually in operation."

William Spanos (1987) has noted that certain Latin words for culture not only signify agriculture or domestication, but are translations from Greek terms for the spatial image of time. We are, at base, "time-binders", in Alfred Korzybski's lexicon (1948); the species, due to this characteristic, creates a symbolic class of life, an artificial world. Time-binding reveals itself in an "enormous increase in the control over nature." Time becomes real because it has consequences, and this efficacy has never been more painfully apparent.

Life, in its barest outline, is said to be a journey through time; that it is a journey through alienation is the most public of secrets. "No clock strikes for the happy one," says a German proverb. Passing time, once meaningless, is now the inescapable beat, restricting and coercing us, mirroring blind authority itself. Guyau (1890) determined the flow of

time to be "the distinction between what one needs and what one has," and therefore "the incipience of regret." *Carpe diem*, the maxim counsels, but civilization forces us always to mortgage the present to the future.

Time aims continually toward greater strictness of regularity and universality. Capital's technological world charts its progress by this, could not exist in its absence. "The importance of time," wrote Bertrand Russell (1929), lies "rather in relation to our desires than in relation to truth." There is a longing that is as palpable as time has become. The denial of desire can be gauged no more definitively than via the vast construct we call time.

Time, like technology, is never neutral; it is, as Castoriadis (1991) rightly judged, "always endowed with meaning." Everything that commentators like Ellul (1964) have said about technology, in fact, applies to time, and more deeply. Both conditions are pervasive, omnipresent, basic, and in general as taken for granted as alienation itself. Time, like technology, is not only a determining fact but also the enveloping element in which divided society develops. Similarly, it demands that its subjects be painstaking, "realistic", serious, and above all, devoted to work. It is autonomous in its overall aspect, like technology; it goes on forever of its own accord.

But like division of labor, which stands behind and sets in motion time and technology, it is, after all, a socially learned phenomenon. Humans, and the rest of the world, are synchronized to time and its technical embodiment, rather than the reverse. Central to this dimension--as it is to alienation per se--is the feeling of being a helpless spectator. Every rebel, it follows, also rebels against time and its relentlessness. Redemption must involve, in a very fundamental sense, redemption from time.

"Time is the accident of accidents," according to Epicurus. Upon closer examination, however, its genesis appears less mysterious. It has occurred to
many, in fact, that notions such as "the past", "the present", and "the future" are more linguistic than actual or physical. The neo-Freudian theorist Lacan, for example, decided that the time experience is essentially an effect of language. A person with no language would likely have no sense of the passage of time. R.A. Wilson (1980), moving much closer to the point, suggested that language was initiated by the need to express symbolic time. Gosseth (1972) argued that the system of tenses found in Indo-European languages developed along with consciousness of a universal or abstract time. Time and language are coterminous, decided Derrida (1982): "to be in the one is to be in the other." Time is a symbolic construct immediately prior, relatively speaking, to all the others and which requires language for its actualization.

Paul Valéry (1962) referred to the fall of the species into time as signalling alienation from nature; "by a sort of abuse, man creates time," he wrote. In the timeless epoch before this fall, which constituted the overwhelming majority of our existence as humans, life, as has often been said, had a rhythm but not a progression. It was the state when the soul could "gather in the whole of its being," in Rousseau's words, in the absence of temporal strictures, "where time is nothing to the soul." Activities themselves, usually of a leisurely character, were the points of reference before time and civilization; nature provided the necessary signals, quite independent of "time". Humanity must have been conscious of memories and purposes long before any explicit distinctions were drawn among past, present, and future (Fraser, 1990). Furthermore, as the linguist Whorf (1956) estimated, "preliterate ['primitive'] communities, far from being subrational, may show the human mind functioning on a higher and more complex plane of rationality than among civilized men."

The largely hidden key to the symbolic world is time; indeed it is at the origin of human symbolic activity. Time thus occasions the first alienation, the route away from aboriginal richness and wholeness. "Out of the simultaneity of experience, the event of Language," says Charles Simic (1971) "is an emergence into linear time." Researchers such as Zohar (1982) consider faculties of telepathy and precognition to have been sacrificed for the sake of evolution into symbolic life. If this sounds far-fetched, the sober positivist Freud (1932) viewed telepathy as quite possibly "the original archaic means through which individuals understand one another." If the perception and apperception of time relate to the very essence of cultural life (Gurevich 1976), the advent of this time sense and its concomitant culture represent an impoverishment, even a disfigurement, by time.

The consequences of this intrusion of time, via language, indicate that the latter is no more innocent, neutral, or assumption-free than the former. Time is not only, as Kant said, at the foundation of all our representations, but, by this fact, also at the foundation of our adaptation to a qualitatively reduced, symbolic world. Our experience in this world is under an all-pervasive pressure to be representation, to be almost unconsciously degraded into symbols and measurements. "Time," wrote the German mystic Meister Eckhart, "is what keeps the light from reaching us."

Time awareness is what empowers us to deal with our environment symbolically; there is no time apart from this estrangement. It is by means of progressive symbolization that time becomes naturalized, becomes a given, is removed from the sphere of conscious cultural production. "Time becomes human in the measure to which it becomes

actualized in narrative," is another way of putting it (Ricoeur 1984). The symbolic accretions in this process constitute a steady throttling of instinctive desire; repression develops the sense of time unfolding. Immediacy gives way, replaced by the mediations that make history possible--language in the forefront.

One begins to see past such banalities as "time is an incomprehensible quality of the given world" (Sebba 1991). Number, art, religion make their appearances in this "given" world, disembodied phenomena of reified life. These emerging rites, in turn, Gurevitch (1964) surmises, lead to "the production of new symbolic contents, thus encouraging time leaping forward." Symbols, including time, of course, now have lives of their own, in this cumulative, interacting progression. David Braine's *The Reality of Time and the Existence of God* (1988) is illustrative. It argues that it is precisely time's reality which proves the existence of God; civilization's perfect logic.

All ritual is an attempt, through symbolism, to return to the timeless state. Ritual is a gesture of abstraction from that state, however, a false step that only leads further away. The "timelessness" of number is part of this trajectory, and contributes much to time as a fixed concept. In fact, Blumenberg (1983) seems largely correct in assaying that "time is not measured as something that has been present all along; instead it is produced, for the first time, by measurement." To express time we must, in some way, quantify it; number is therefore essential. Even where time has already appeared, a slowly more divided social existence works toward its progressive reification only by means of number. The sense of passing time is not keen among tribal peoples, for example, who do not mark it with calendars or clocks.

Time: an original meaning of the word in ancient Greek is *division*. Number, when added to time, makes the dividing or separating that much more potent. The non-civilized often have considered it "unlucky" to count living creatures, and generally resist adopting the practice (e.g. Dobrizhoffer 1822). The intuition for number was far from spontaneous and inevitable, but "already in early civilizations," Schimmel (1992) reports, "one feels that numbers are a reality having as it were a magnetic power field around them." It is not surprising that among ancient cultures with the strongest emerging senses of time--Egyptian, Babylonian, Mayan--we see numbers associated with ritual figures and deities; indeed the Mayans and Babylonians both had number gods (Barrow 1992).

Much later the clock, with its face of numbers, encouraged society to abstract and quantify the experience of time still further. Every clock reading is a measurement that joins the clock watcher to the "flow of time". And we absently delude ourselves that we know what

time is because we know what time it is. If we did away with clocks, Shallis (1982) reminds us, objective time would also disappear. More fundamentally, if we did away with specialization and technology, alienation would be banished.

The mathematizing of nature was the basis for the birth of modern rationalism and science in the West. This had stemmed from demands for number and measurement in connection with similar teachings about time, in the service of mercantile capitalism. The continuity of number and time as a geometrical locus were fundamental to the Scientific Revolution, which projected Galileo's dictum to measure all that is measurable and make measurable that which is not. Mathematically divisible time is necessary for the conquest of nature, and for even the rudiments of modern technology.

From this point on, number-based symbolic time became crushingly real, an abstract construction "removed from and even contrary to every internal and external human experience" (Syzamosi 1986). Under its pressure, money and language, merchandise and information have become steadily less distinguishable, and division of labor more extreme.

To symbolize is to express time consciousness, for the symbol embodies the structure of time (Darby 1982). Clearer still is Meerloo's formulation: "To understand a symbol and its development is to grasp human history in a nutshell." The contrast is the life of the non-civilized, lived in a capacious present that cannot be reduced to the single moment of the mathematical present. As the continual now gave way to increasing reliance upon systems of significant symbols (language, number, art, ritual, myth) dislodged from the now, the further abstraction, history, began to develop. Historical time is no more inherent in reality, no less an imposition on it, than the earlier, less choate forms of time.

In a slowly more synthetic context, astronomical observation is invested with new meanings. Once pursued for its own sake, it comes to provide the vehicle for scheduling rituals and coordinating the activities of complex society. With the help of the stars, the year and its divisions exist as instruments of organizational authority (Leach 1954). The formation of a calendar is basic to the formation of a civilization. The calendar was the first symbolic artifact that regulated social behavior by keeping track of time. And what is involved is not the control of time but its opposite: enclosure by time in a world of very real alienation. One recalls that our word comes from the Latin *calends*, the first day of the month, when business accounts had to be settled.

"No time is entirely present," said the Stoic Chrysippus, and meanwhile the concept of time was being further advanced by the

underlying Judeo-Christian tenet of a linear, irreversible path between creation and salvation. This essentially historical view of time is the very core of Christianity; all the basic notions of measurable, one-way time can be found in St. Augustine's (fifth-century) writings. With the spread of the new religion the strict regulation of time, on a practical plane, was needed to help maintain the discipline of monastic life. Bells summoning the monks to prayer eight times daily were heard far beyond the confines of the cloister, and thus a measure of time regulation was imposed on society at large. The population continued to exhibit "une vaste indifférance au temps" throughout the feudal era, according to Marc Bloch (1940), but it is no accident that the first public clocks adorned cathedrals in the West. Worth noting in this regard is the fact that the calling of precise prayer times became the chief externalization of medieval Islamic belief.

The invention of the mechanical clock was one of the most important turning points in the history of science and technology; indeed of all human art and culture (Synge 1959). The improvement in accuracy presented authority with enhanced opportunities for oppression. An early devotee of elaborate mechanical clocks, for example, was Duke Gian Galeazzo Visconti, described in 1381 as "a sedate but crafty ruler with a great love of order and precision" (Fraser 1988). As Weizenbaum (1976) wrote, the clock began to create "literally a new reality...that was and remains an impoverished version of the old one."

A qualitative change was introduced. Even when nothing was happening, time did not cease to flow. Events, from this era on, are put into this homogeneous, objectively measured, moving envelope--and this unilinear progression incited resistance. The most extreme were the chiliast, or millenarian, movements, which appeared in various parts of Europe from the 14th into the 17th centuries. These generally took the form of peasant risings which aimed at recreating the primal egalitarian state of nature and were explicitly opposed to historical time. These utopian explosions were quelled, but remnants of earlier time concepts persisted as a "lower" stratum of folk consciousness in many areas.

During the Renaissance, domination by time reached a new level as public clocks now tolled all twenty-four hours of the day and added new hands to mark the passing seconds. A keen sense of time's all-consuming presence is the great discovery of the age, and nothing portrays this more graphically than the figure of Father Time. Renaissance art fused the Greek god Kronos with the Roman god Saturn to form the familiar grim deity representing the power of Time, armed with a fatal scythe signifying his association with agriculture/ domestication. The Dance of Death and other medieval *memento mori* artifacts preceded Father Time, but the subject is now time rather than death.

The seventeenth century was the first in which people thought of themselves as inhabiting a particular century. One now needed to take one's bearings *within* time. Francis Bacon's *The Masculine Birth of Time* (1603) and *A Discourse Concerning a New Planet* (1605) embraced the deepening dimension and revealed how a heightened sense of time could serve the new scientific spirit. "To choose time is to save time," he wrote, and "Truth is the daughter of time." Descartes followed, introducing the idea of time as limitless. He was one of the first advocates of the modern idea of progress, closely related to that of unbounded linear time, and characteristically expressing itself in his famous invitation that we become "masters and possessors of nature."

Newton's clockwork universe was the crowning achievement of the Scientific Revolution in the seventeenth century, and was grounded in his conception of "Absolute, true and mathematical time, of itself and from its own nature, flowing equably without relation to anything eternal." Time is now the grand ruler, answering to no one, influenced by nothing, completely independent of the environment: the model of unassailable authority and perfect guarantor of unchanging alienation. Classical Newtonian physics in fact remains, despite changes in science, the dominant, everyday conception of time.

The appearance of independent, abstract time found its parallel in the emergence of a growing, formally free working class forced to sell its labor power as an abstract commodity on the market. Prior to the coming of the factory system but already subject to time's disciplinary power, this labor force was the inverse of the monarch Time: free and independent in name only. In Foucault's judgment (1973), the West had become a "carceral society" from this point on. Perhaps more directly to the point is the Balkan proverb, "A clock is a lock."

In 1749 Rousseau threw away his watch, a symbolic rejection of modern science and civilization. Somewhat more in the dominant spirit of the age, however, were the gifts of fifty-one watches to Marie Antoinette upon her engagement. The word is certainly appropriate, as people had to "watch" the time more and more; watches would soon become one of the first consumer durables of the industrial era.

William Blake and Goethe both attacked Newton, the symbol of the new time and science, for his distancing of life from the sensual, his reduction of the natural to the measurable. Capitalist ideologue Adam Smith, on the other hand, echoed and extended Newton, by calling for greater rationalization and routinization. Smith, like Newton, labored under the spell of an increasingly powerful and remorseless time in promoting further division of labor as objective and absolute progress.

The Puritans had proclaimed waste of time the first and in principle the deadliest of sins (Weber 1921); this became, about a century

later, Ben Franklin's "Time is money." The factory system was initiated by clockmakers and the clock was the symbol and fountainhead of the order, discipline and repression required to create an industrial proletariat.

Hegel's grand system in the early 19th century heralded the "push into time" that is History's momentum; time is our "destiny and necessity," he declared. Postone (1993) noted that the "progress" of abstract time is closely tied to the "progress" of capitalism as a way of life. Waves of industrialism drowned the resistance of the Luddites; appraising this general period, Lyotard (1988) decided that "the illness of time was now incurable."

An increasingly complex class society requires an ever larger array of time signals. Fights against time, as Thompson (1967) and Hohn (1984) have pointed out, gave way to struggles over time; resistance to being yoked to time and its inherent demands was defeated in general, replaced, typically, by disputes over the fair determination of time schedules or the length of the work day. [In an address to the First International (July 28, 1868), Karl Marx advocated, by the way, age nine as the time to begin work.]

The clock descended from the cathedral, to court and courthouse, next to the bank and railway station, and finally to the wrist and pocket of each decent citizen. Time had to become more "democratic" in order to truly colonize subjectivity. The subjection of outer nature, as Adorno and others have understood, is successful only in the measure of the conquest of inner nature. The unleashing of the forces of production, to put it another way, depended on time's victory in its long-waged war on freer consciousness. Industrialism brought with it a more complete commodification of time, time in its most predatory form yet. It was this that Giddens (1981) saw as "the key to the deepest transformations of day-to-day social life that are brought about by the emergence of capitalism."

"Time marches on," as the saying goes, in a world increasingly dependent on time and a time increasingly unified. A single giant clock hangs over the world and dominates. It pervades all; in its court there is no appeal. The standardization of world time marks a victory for the efficient/machine society, a universalism that undoes particularity as surely as computers lead to homogenization of thought.

Paul Virilio (1986) has gone so far as to foresee that "the loss of material space leads to the government of nothing but time." A further provocative notion posits a reversal of the birth of history out of maturing time. Virilio (1991), in fact, finds us already living within a system of technological temporality where history has been eclipsed. "... the primary question becomes less one of relations to *history* than one

of relations to *time*."

Such theoretical flights aside, however, there is ample evidence and testimony as to time's central role in society. In "Time--The Next Source of Competitive Advantage" (July-August, 1988 *Harvard Business Review*), George Stark, Jr. discusses it as pivotal in the positioning of capital: "As a strategic weapon, time is the equivalent of money, productivity, quality, even innovation." Time management is certainly not confined to the corporations; Levine's 1985 study of publicly accessible clocks in six countries demonstrated that their accuracy was an exact gauge of the relative industrialization of national life. Paul Adler's January-February, 1993 *Harvard Business Review* offering, "Time-and-Motion Regained", nakedly champions the neo-Taylorist standardization and regimentation of work: behind the well-publicized "workplace democracy" window dressing in some factories remains the "time-and-motion discipline and formal bureaucratic structures essential for efficiency and quality in routine operations."

It is clear that the advent of writing facilitated the fixation of time concepts and the beginning of history. But as the anthropologist Goody (1986) points out, "oral cultures are often only too prepared to accept these innovations." They have already been conditioned, after all, by language itself. McLuhan (1962) discussed how the coming of the printed book, and mass literacy, reinforced the logic of linear time.

Life was steadily forced to adapt. "For now hath time made me his numbering clock," wrote Shakespeare in *Richard II*. "Time", like "rich", was one of the favorite words of the Bard, a time-haunted figure. A hundred years later, Defoe's Robinson Crusoe reflected how little escape from time seemed possible. Marooned on a desert island, Crusoe is deeply concerned with the passage of time; keeping close track of his affairs, even in such a setting, meant above all keeping track of the time, especially as long as his pen and ink lasted.

Northrop Frye (1950) saw the "alliance of time and Western man" as the defining characteristic of the novel. Ian Watt's *The Rise of the Novel* (1957) likewise focused on the new concern with time that stimulated the novel's emergence in the eighteenth century. As Jonathan Swift told it in *Gulliver's Travels* (1726), his protagonist never did anything without looking at his watch. "He called it his oracle, and said it pointed out the time for every action of his life." The Lilliputians concluded that the watch was Gulliver's god. Sterne's *Tristram Shandy* (1760), on the eve of the Industrial Revolution, begins with the mother of Tristram interrupting his father at the moment of their monthly coitus: "'Pray, my dear,' quoth my mother, 'have you not forgot to wind up the clock?'"

In the nineteenth century Poe satirized the authority of clocks, linking them to bourgeois superficiality and obsession with order. Time

is the real subject of Flaubert's novels, according to Hauser (1956), as Walter Pater (1901) sought in literature the "wholly concrete moment" which would "absorb past and future in an intense consciousness of the present," similar to Joyce's celebration of "epiphanies". In *Marius the Epicurean* (1909), Pater depicts Marius suddenly realizing "the possibility of a real world beyond time." Meanwhile Swinburne looked for a respite beyond "time-stricken lands" and Baudelaire declared his fear and hatred of chronological time, the devouring foe.

The disorientation of an age wracked by time and subject to the acceleration of history has led modern writers to deal with time from new and extreme points of view. Proust delineated interrelationships among events that transcended conventional temporal order and thus violated Newtonian conceptions of causation. His thirteen-volume *A la Recherche du Temps Perdu* (1925), usually rendered in English as *Remembrance of Things Past*, is more literally and accurately translated as *Searching for Lost Time*. In it he judges that "a minute freed from the order of time has recreated in us...the individual freed from the order of time," and recognizes "the only environment in which one could live and enjoy the essence of things, that is to say, entirely outside time."

Philosophy in the twentieth century has been largely preoccupied with time. Consider the misguided attempts to locate authentic time by thinkers as different as Bergson and Heidegger, or the latter's virtual deification of time. A.A.Mendilow's *Time and the Novel* (1952) reveals how the same intense interest has dominated the novels of the century, in particular those of Joyce, Woolf, Conrad, James, Gide, Mann, and of course, Proust. Other studies, such as Church's *Time and Reality* (1962), have expanded this list of novelists to include, among others, Kafka, Sartre, Faulkner, and Vonnegut.

And of course time-struck literature cannot be confined to the novel. T.S.Eliot's poetry often expressed a yearning to escape time-bound, time-ridden conventionality. "Burnt Norton" (1941) is a good example, with these lines:

> Time past and time future
> Allow but a little consciousness.
> To be conscious is not to be in time.

Samuel Beckett, early in his career (1931), wrote pointedly of "the poisonous ingenuity of Time in the science of affliction." The play *Waiting for Godot* (1955) is an obvious candidate in this regard, and so is his *Murphy* (1957), in which time becomes reversible in the mind of the main character. When the clock may go either way, our sense of time, and time itself, vanishes.

Turning to what is commonly called psychology, we again come upon one of the most fundamental questions: Is there really a phenomenon

of time that exists apart from any individual, or does it reside only in one's perceptions of it? Husserl, for example, failed to show why consciousness in the modern world seems to inevitably constitute itself in time. We know that experiences, like events of every other kind, are neither past, present nor future in themselves.

Whereas there was little sociological interest in time until the 1970s, the number of studies of time in the literature of psychology has increased rapidly since 1930 (Lauer 1988). Time is perhaps hardest of all to define "psychologically". What is time? What is the experience of time? What is alienation? What is the experience of alienation? If the latter subject were not so neglected the obvious interrelationship would be made clear.

Davies (1977) termed time's passage "a psychological phenomenon of mysterious origin" and concluded (1983), "the secret of mind will only be solved when we understand the secret of time." Given the artificial separation of the individual from society, which defines their field, it is inevitable that such psychologists and psychoanalysts as Eissler (1955), Loewald (1962), Namnum (1972), and Morris (1983) have encountered "great difficulties" in studying time!

At least a few partial insights have been achieved, however. Hartcollis (1983), for instance, noted that time is not only an abstraction but a feeling, while Korzybski (1948) had already taken this further with his observation that "'time' is a feeling, produced by conditions of this world...." In all our lives we are "waiting for Godot," according to Arlow (1986), who believed that our experience of time arises out of unfulfilled emotional needs. Similarly, Reichenbach (1956) had termed anti-time philosophies, like religion, "documents of emotional dissatisfaction." In Freudian terms, Bergler and Roheim (1946) saw the passage of time as symbolizing separation periods originating in early infancy. "The calendar is an ultimate materialization of separation anxiety." If informed by a critical interest in the social and historical context, the implications of these undeveloped points could become serious contributions. Confined to psychology, however, they remain limited and even misleading.

In the world of alienation no adult can contrive or decree the freedom from time that the child habitually enjoys--and must be made to lose. Time training, the essence of schooling, is vitally important to society. This training, as Fraser (1989) very cogently puts it, "bears in almost paradigmatic form the features of a civilizing process." A patient of Joost Meerlo (1970) "expressed it sarcastically: 'Time is civilization," by which she meant that scheduling and meticulousness were the great weapons used by adults to force the youngsters into submission and servility." Piaget's studies (1946, 1952) could detect no innate sense of

time. Rather, the abstract notion of "time" is of considerable difficulty to the young. It is not something they learn automatically; there is no spontaneous orientation toward time (Hermelin and O'Connor 1971, Voyat 1977).

Time and *tidy* are related etymologically, and our Newtonian idea of time represents perfect and universal ordering. The cumulative weight of this ever more pervasive pressure shows up in the increasing number of patients with time anxiety symptoms (Lawson 1990). Dooley (1941) referred to "the observed fact that people who are obsessive in character, whatever their type of neurosis, are those who make most extensive use of the sense of time...." Pettit's "Anality and Time" (1969) argued convincingly for the close connection between the two, as Meerloo (1966), citing the character and achievements of Mussolini and Eichmann, found "a definite connection between time compulsion and fascistic aggression."

Capek (1961) called time "a huge and chronic hallucination of the human mind"; there are few experiences indeed that can be said to be timeless. Orgasm, LSD, a life "flashing before one's eyes" in a moment of extreme danger...these are some of the rare, evanescent situations intense enough to escape from time's insistence.

Timelessness is the ideal of pleasure, wrote Marcuse (1955). The passage of time, on the other hand, fosters the forgetting of what was and what can be. It is the enemy of eros and deep ally of the order of repression. The mental processes of the unconscious are in fact timeless, decided Freud (1920). "...time does not change them in any way and the idea of time cannot be applied to them." Thus desire is already outside of time. As Freud said in 1932: "There is nothing in the Id that corresponds to the notion of time; there is no recognition of the passage of time."

Marie Bonaparte (1940) argued that time becomes ever more plastic and obedient to the pleasure principle insofar as we loosen the bonds of full ego control. Dreams are a form of thinking among non-civilized peoples (Kracke 1987); this faculty must have once been much more accessible to us. The Surrealists believed that reality could be much more fully understood if we could make the connection to our instinctive, subconscious experiences; Breton (1924), for example, proclaimed the radical goal of a resolution of dream and conscious reality.

When we dream the sense of time is virtually nonexistent, replaced by a sensation of presentness. It should come as no surprise that dreams, which ignore the rules of time, would attract the notice of those searching for liberatory clues, or that the unconscious, with its "storms of impulse," frightens those with a stake in the neurosis we call civilization. Norman O. Brown (1959) saw the sense of time or history as

a function of repression; if repression were abolished, he reasoned, we would be released from time. Similarly, Coleridge (1801) recognized in the man of "methodical industry" the origin and creator of time.

In his *Critique of Cynical Reason* (1987), Peter Sloterdijk called for the "radical recognition of the Id without reservation," a narcissistic self-affirmation that would laugh in the face of morose society. Narcissism has of course traditionally been cast as wicked, the "heresy of self-love." In reality that meant it was reserved for the ruling classes, while all others (workers, women, slaves) had to practice submission and self-effacement (Fine 1980). The narcissist symptoms are feelings of emptiness, unreality, alienation, life as no more than a succession of moments, accompanied by a longing for powerful autonomy and self-esteem (Alford 1988, Grunberger 1979). Given the appropriateness of these "symptoms" and desires it is little wonder that narcissism can be seen as a potentially emancipatory force (Zweig 1980). Its demand for total satisfaction is obviously a subversive individualism, at a minimum.

The narcissist "hates time, denies time" (letter to author, Alford 1993) and this, as always, provokes a severe reaction from the defenders of time and authority. Psychiatrist E. Mark Stern (1977), for instance: "Since time begins beyond one's control one must correspond to its demands....Courage is the antithesis of narcissism." This condition, which certainly may include negative aspects, contains the germ of a different reality principle, aiming at the non-time of perfection wherein being and becoming are one and including, implicitly, a halt to time.

> I'm not a scientist but I do know that all things begin and end in eternity.
>
> -*The Man Who Fell to Earth*, Walter Tevis

Science, for our purposes, does not comment on time and estrangement with anywhere near the directness of, say, psychology. But science can be re-construed to shed light on the topic at hand, because of the many parallels between scientific theory and human affairs.

"Time," decided N.A. Kozyrev (1971), " is the most important and the most mysterious phenomenon of Nature. Its notion is beyond the grasp of imagination." Some scientists, in fact, have felt (e.g. Dingle 1966) that "all the real problems associated with the notion of time are independent of physics." Science, and physics in particular, may indeed not have the last word; it is another source of commentary, however, though itself alienated and generally indirect.

Is "physical time" the same as the time of which we are conscious; if not, how does it differ? In physics, time seems to be an undefined basic dimension, as much a taken-for- granted given as it is outside

the realm of science. This is one way to remind ourselves that, as with every other kind of thinking, scientific ideas are meaningless outside their cultural context. They are symptoms of and symbol for the ways of living that give rise to them. According to Nietzsche, all writing is inherently metaphorical, even though science is rarely looked at this way. Science has developed by drawing an increasingly sharp separation between inner and outer worlds, between dream and "reality". This has been accomplished by the mathematization of nature, which has largely meant that the scientist proceeds by a method that debars him or her from the larger context, including the origins and significance of his/her projects. Nonetheless, as H.P. Robinson (1964) stated, "the cosmologies which humanity has set up at various times and in various localities inevitably reflect the physical and intellectual environment, including above all the interests and culture of each society."

Subjective time, as P.C.W. Davies pointed out (1981), "possesses apparent qualities that are absent from the 'outside' world and which are fundamental to our conception of reality"--principally the "passing" of time. Our sense of separation from the world owes largely to this discrepancy. We exist in time (and alienation), but time is not found in the physical world. The time variable, though useful to science, is a theoretical construct. "The laws of science," Stephen Hawking (1988) explained, "do not distinguish between past and future." Einstein had gone further than this some thirty years earlier; in one of his last letters, he wrote that "People like us, who believe in physics, know that the distinction between past, present and future is only a stubborn, persistent illusion." But science partakes of society in other ways concerning time, and very deeply. The more "rational" it becomes, the more variations in time are suppressed. Theoretical physics geometrizes time by conceiving it as a straight line, for example. Science does not stand apart from the cultural history of time.

As implied above, however, physics does not contain the idea of a present instant of time that passes (Park 1972). Furthermore, the fundamental laws are not only completely reversible as to the 'arrow of time'--as Hawking noted--but "irreversible phenomena appear as the result of the particular nature of our human cognition," according to Watanabe (1953). Once again we find human experience playing a decisive role, even in this most "objective" realm. Zee (1992) put it this way: "Time is that one concept in physics we can't talk about without dragging in, at some level, consciousness."

Even in seemingly straightforward areas ambiguities exist where time is concerned. While the complexity of the most complex species may increase, for example, not all species become more complex, prompting J.M. Smith (1972) to conclude that it is "difficult to say whether

evolution as a whole has a direction."

In terms of the cosmos, it is argued, "time's arrow" is automatically indicated by the fact that the galaxies are receding away from each other. But there seems to be virtual unanimity that as far as the basics of physics are concerned, the "flow" of time is irrelevant and makes no sense; fundamental physical laws are completely neutral with regard to the direction of time (Mehlberg 1961, 1971, Landsberg 1982, Squires 1986, Watanabe 1953, 1956, Swinburne 1986, Morris 1983, Mallove 1987, D'Espagnat 1989, etc.). Modern physics even provides scenarios in which time ceases to exist and, in reverse, comes into existence. So why is our world asymmetric in time? Why can't it go backward as well as forward? This is a paradox, inasmuch as the individual molecular dynamics are all reversible. The main point, to which I will return later, is that time's arrow reveals itself as complexity develops, in striking parallel with the social world.

The flow of time manifests itself in the context of future and past, and they in turn depend on a referent known as the now. With Einstein and relativity, it is clear that there is no universal present: we cannot say it is "now" throughout the universe. There is no fixed interval at all that is independent of the system to which it refers, just as alienation is dependent on its context.

Time is thus robbed of the autonomy and objectivity it enjoyed in the Newtonian world. It is definitely more individually delineated, in Einstein's revelations, than the absolute and universal monarch it had been. Time is relative to specific conditions and varies according to such factors as speed and gravitation. But if time has become more "decentralized", it has also colonized subjectivity more than ever before. As time and alienation have become the rule throughout the world, there is little solace in knowing that they are dependent on varying circumstances. The relief comes in acting on this understanding; it is the invariance of alienation that causes the Newtonian model of independently flowing time to hold sway within us, long after its theoretical foundations were eliminated by relativity.

Quantum theory, dealing with the smallest parts of the universe, is known as the fundamental theory of matter. The core of quantum theory follows other fundamental physical theories, like relativity, in making no distinction in the direction of time (Coveney and Highfield 1991). A basic premise is indeterminism, in which the movement of particles at this level is a matter of probabilities. Along with such elements as positrons, which can be regarded as electrons moving backward in time, and tachyons, faster-than-light particles that generate effects and contexts reversing the temporal order (Gribbin 1979, Lindley 1993), quantum physics has raised fundamental questions about time and

causality. In the quantum microworld common acausal relationships have been discovered that transcend time and put into question the very notion of the ordering of events in time. There can be "connections and correlations between very distant events *in the absence of any intermediary force or signal*" and which occur *instantaneously* (Zohar 1982, Aspect 1982). That phenomena in which action taken now affects the course of events that have already happened is an inescapable phenomenon of quantum, or particle physics.

Gleick (1992) summed up the situation as follows: "With simultaneity gone, sequentiality was foundering, causality was under pressure, and scientists generally felt themselves free to consider temporal possibilities that would have seemed far-fetched a generation before." At least one approach in quantum physics has attempted to remove the notion of time altogether (J.G. Taylor 1972); D. Park (1972), for instance, said, "I prefer the atemporal representation to the temporal one."

The bewildering situation in science finds its match in the extremity of the social world. Alienation, like time, produces ever greater oddities and pressures: the most fundamental questions finally, almost necessarily, emerge in both cases.

St. Augustine's fifth century complaint was that he didn't understand what the measurement of time really consisted of. Einstein, admitting the inadequacy of his comment, often defined time as "what a clock measures." Quantum physics, for its part, posits the inseparability of measurer and what is measured. Via a process physicists don't claim to understand fully, the act of observation or measurement not only reveals a particle's condition but actually determines it (Pagels 1983). This has prompted the question, "Is everything--including time--built from nothingness by acts of observer-participancy?" Again a striking parallel, for alienation, at every level and from its origin, requires exactly such participation, virtually as a matter of definition.

Time's arrow--irrevocable, one-direction-only time--is the monster that has proven itself more terrifying than any physical projectile. Directionless time is not time at all, and Cambel (1993) identifies time directionality as "a primary characteristic of complex systems." The time-reversible behavior of atomic particles is "generally commuted into behavior of the system that is irreversible," concluded Schlegel (1961). If not rooted in the micro world, where does time come from? Where does our time-bound world come from? It is here that we encounter a provocative analogy. The small scale world described by physics, with its mysterious change into the macro world of complex systems, is analogous to the "primitive" social world and the origins of division of labor, leading to complex, class-divided society with its apparently irreversible "progress".

ORIGINS

A generally held tenet of physical theory is that the arrow of time is dependent on the Second Law of Thermodynamics (e.g. Reichenbach 1956), which asserts that all systems tend toward ever greater disorder or entropy. The past is thus more orderly than the future. Some proponents of the Second Law (e.g. Boltzmann 1866) have found in entropic increase the very meaning of the past-future distinction.

This general principle of irreversibility was developed in the middle decades of the 19th century, beginning with Carnot in 1824, when industrial capitalism itself reached its apparent non-reversible point. If evolution was the century's optimistic application of irreversible time, the Second Law of Thermodynamics was its pessimistic one. In its original terms, it pictured a universe as an enormous heat engine running down, where work became increasingly subject to inefficiency and disorder. But nature, as Toda (1978) noticed, is not an engine, does not work, and is not concerned with "order" or "disorder". The cultural aspect of this theory--namely, capital's fear for its future--is hard to miss.

One hundred and fifty years later, theoretical physicists realize that the Second Law and its supposed explanation of the arrow of time cannot be considered a solved problem (Néeman 1982). Many supporters of reversible time in nature consider the Second Law too superficial, a secondary law not a primary one (e.g. Haken 1988, Penrose 1989). Others find the very concept of entropy ill-defined and problematic, and, related to the charge of superficiality, it is argued that the phenomena described by the Second Law can be ascribed to particular initial conditions and do not represent the workings of a general principle (Davies 1981, Barrow 1991). Furthermore, not every pair of events that bear the "afterward" relation the one to the other bear an entropic difference. The science of complexity (with a wider scope than chaos theory) has discovered that not all systems tend toward disorder (Lewin 1992), also contrary to the Second Law. Moreover, isolated systems, in which no exchanges with the environment are allowed, display the Second Law's irreversible trend; even the universe may not be such a closed system. In fact, we don't know whether the total entropy of the universe is increasing, decreasing, or remaining stationary.

Despite such aporias and objections, a movement toward an "irreversible physics" based on the Second Law is underway, with quite interesting implications. 1977 Nobel Laureate Ilya Prigogine seems to be the most tireless and public advocate of the view that there is an innate unidirectional time at all levels of existence. Whereas the fundamentals of every major scientific theory, as noted, are neutral with respect to time, Prigogine gives time a primary emphasis in the universe. Irreversibility is for him and his like-minded fellow believers an over-

arching primal axiom. In supposedly nonpartisan science, the question of time has clearly become a political matter.

Prigogine (1985), in a symposium sponsored by Honda and promoting such projects as Artificial Intelligence: "Questions such as the origin of life, the origin of the universe, or the origin of matter, can no longer be discussed without recourse to irreversibility." It is no coincidence that non-scientist Alvin Toffler, America's leading cheerleader for a high-tech world, provided an enthusiastic forward for one of the basic texts of the pro-time campaign, Prigogine and Stenger's *Order Out of Chaos* (1984). Prigogine disciple Ervin Laszlo, in a bid to legitimate and extend the dogma of universally irreversible time, asks whether the laws of nature are applicable to the human world. He soon answers, in effect, his own disingenuous question (1985): "The general irreversibility of technological innovation overrides the indeterminacy of individual points of bifurcation and drives the processes of history in the observed direction from primitive tribes to modern techno-industrial states." How "scientific"! This transposition from the "laws of nature" to the social world could hardly be improved on as a description of time, division of labor, and the mega-machine crushing the autonomy or "reversibility" of human decision. Leggett (1987) expressed this perfectly: "So it would seem that the arrow of time which appears in the apparently impersonal subject of thermodynamics is intimately related to what we, as human agents, can or cannot do."

It is deliverance from "chaos" which Prigogine and others promise the ruling system, using the model of irreversible time. Capital has always reigned in fear of entropy or disorder. Resistance, especially resistance to work, is the real entropy, which time, history, and progress constantly seek to banish. Prigogine and Stenger (1984) wrote: "Irreversibility is either true on all levels or none." All or nothing, always the ultimate stakes of the game.

Since civilization subjugated humanity we have had to live with the melancholy idea that our highest aspirations are perhaps impossible in a world of steadily mounting time. The more that pleasure and understanding are deferred, moved out of reach--and this is the essence of civilization--the more palpable is the dimension of time. Nostalgia for the past, fascination with the idea of time travel, and the heated quest for increased longevity are some of the symptoms of time sickness, and there seems to be no ready cure. "What does not elapse in time is the lapse of time itself," as Merleau-Ponty (1962) realized.

In addition to the general antipathy at large, however, it is possible to point out some recent specifics of opposition. The Society for the Retardation of Time was established in 1990 and has a few hundred members in four European countries. Less whimsical than it may sound,

its members are committed to reversing the contemporary acceleration of time in everyday life, toward the aim of being allowed to live more satisfying lives. Michael Theunissen's *Negative Theology of Time* appeared in 1991, aimed explicitly at what it sees as the ultimate human enemy. This work has engendered a very lively debate in philosophical circles (Penta 1993), due to its demand for a negative reconsideration of time.

"Time is the one single movement appropriate to itself in all its parts," wrote Merleau-Ponty (1962). Here we see the fullness of alienation in the separated world of capital. Time is thought of by us before its parts; it thus reveals the totality. The crisis of time is the crisis of the whole. Its triumph, apparently well established, was in fact never complete as long as anyone could question the first premises of its being.

Above Lake Silviplana, Nietzsche found the inspiration for *Thus Spake Zarathustra*. "Six thousand feet above men and time...," he wrote in his journal. But time cannot be transcended by means of a lofty contempt for humanity, because overcoming the alienation that it generates is not a solitary project. In this sense I prefer Rexroth's (1968) formulation: "the only Absolute is the Community of Love with which Time ends."

Can we put an end to time? Its movement can be seen as the master and measure of a social existence that has become increasingly empty and technicized. Averse to all that is spontaneous and immediate, time more and more clearly reveals its bond with alienation. The scope of our project of renewal must include the entire length of this joint domination. Divided life will be replaced by the possibility of living completely and wholly--timelessly--only when we erase the primary causes of that division.

LANGUAGE
ORIGIN AND MEANING

Fairly recent anthropology (e.g. Sahlins, R.B. Lee) has virtually obliterated the long-dominant conception which defined prehistoric humanity in terms of scarcity and brutalization. As if the implications of this are already becoming widely understood, there seems to be a growing sense of that vast epoch as one of wholeness and grace. Our time on earth, characterized by the very opposite of those qualities, is in deepest need of a reversal of the dialectic that stripped the wholeness from our life as a species.

Being alive in nature, before our abstraction from it, must have involved a perception and contact that we can scarcely comprehend from our levels of anguish and alienation. The communication with all of existence must have been an exquisite play of all the senses, reflecting the numberless, nameless varieties of pleasure and emotion once accessible within us.

To Levy-Bruhl, Durkheim and others, the cardinal and qualitative difference between the "primitive mind" and ours is the primitive's lack of detachment in the moment of experience; "the savage mind totalizes,"[1] as Lévi-Strauss put it. Of course we have long been instructed that this original unity was destined to crumble, that alienation is the province of being human: consciousness depends on it.

In much the same sense as objectified time has been held to be essential to consciousness––Hegel called it "the necessary alienation"–– so has language, and equally falsely. Language may be properly considered the fundamental ideology, perhaps as deep a separation from the natural world as self-existent time. And if timelessness resolves the split between spontaneity and consciousness, languagelessness may be equally necessary.

Adorno, in *Minima Moralia*, wrote: "To happiness the same applies as to truth: one does not have it, but is in it."[2] This could stand as an excellent description of humankind as we existed before the emergence of time and language, before the division and distancing that exhausted authenticity.

Language is the subject of this exploration, understood in its virulent sense. A fragment from Nietzsche introduces its central perspective:

"words dilute and brutalize; words depersonalize; words make the uncommon common."[3]

Although language can still be described by scholars in such phrases as "the most significant and colossal work that the human spirit has evolved,"[4] this characterization occurs now in a context of extremity in which we are forced to call the aggregate of the work of the "human spirit" into question. Similarly, if in Coward and Ellis' estimation, the "most significant feature of twentieth-century intellectual development" has been the light shed by linguistics upon social reality,[5] this focus hints at how fundamental our scrutiny must yet become in order to comprehend maimed modern life. It may sound positivist to assert that language must somehow embody all the "advances" of society, but in civilization it seems that all meaning is ultimately linguistic; the question of the meaning of language, considered in its totality, has become the unavoidable next step.

Earlier writers could define consciousness in a facile way as that which can be verbalized, or even argue that wordless thought is impossible (despite counter-examples such as chess-playing or composing music). But in our present straits, we have to consider anew the meaning of the birth and character of language rather than assume it to be merely a neutral, if not benign, inevitable presence. The philosophers are now forced to recognize the question with intensified interest; Gadamer, for example: "Admittedly, the nature of language is one of the most mysterious questions that exists for man to ponder on."[6]

Because language is the symbolization of thought, and symbols are the basic units of culture, speech is a cultural phenomenon fundamental to what civilization is. And because at the level of symbols and structure there are neither primitive nor developed languages, it may be justifiable to begin by locating the basic qualities of language, specifically to consider the congruence of language and ideology, in a basic sense.

Ideology, alienation's armored way of seeing, is a domination embedded in a systematic false consciousness. It is easier still to begin to locate language in these terms if one takes up another definition common to both ideology and language: namely, that each is a system of distorted communication between two poles and predicated upon symbolization.

Like ideology, language creates false separations and objectifications through its symbolizing power. This falsification is made possible by concealing, and ultimately vitiating, the participation of the subject in the physical world. Modern languages, for example, employ the word "mind" to describe a thing dwelling independently in our bodies, compared with the Sanskrit word, which means "working within,"

involving an active embrace of sensation, perception, and cognition. The logic of ideology, from active to passive, from unity to separation, is similarly reflected in the decay of the verb form in general. It is noteworthy that the much freer and sensuous hunter-gatherer cultures gave way to the Neolithic imposition of civilization, work and property at the same time that verbs declined to approximately half of all words of a language; in modern English, verbs account for less than 10% of words.[7]

Though language, in its definitive features, seems to be complete from its inception, its progress is marked by a steadily debasing process. The carving up of nature, its reduction into concepts and equivalencies, occurs along lines laid down by the patterns of language.[8] And the more the machinery of language, again paralleling ideology, subjects existence to itself, the more blind its role in reproducing a society of subjugation.

Navajo has been termed an "excessively literal" language, from the characteristic bias of our time for the more general and abstract. In a much earlier time, we are reminded, the direct and concrete held sway; there existed a "plethora of terms for the touched and seen."[9] Toynbee noted the "amazing wealth of inflexions" in early languages and the later tendency toward simplification of language through the abandonment of inflexions.[10] Cassirer saw the "astounding variety of terms for a particular action" among American Indian tribes and understood that such terms bear to each other a relation of juxtaposition rather than of subordination.[11] But it is worth repeating once more that while very early on a sumptuous prodigality of symbols obtained, it was a closure of symbols, of abstract conventions, even at that stage, which might be thought of as adolescent ideology.

Considered as the paradigm of ideology, language must also be recognized as the determinant organizer of cognition. As the pioneer linguist Sapir noted, humans are very much at the mercy of language concerning what constitutes "social reality." Another seminal anthropological linguist, Whorf, took this further to propose that language determines one's entire way of life, including one's thinking and all other forms of mental activity. To use language is to limit oneself to the modes of perception already inherent in that language. The fact that language is only form and yet molds everything goes to the core of what ideology is.[12]

It is reality revealed only ideologically, as a stratum separate from us. In this way language creates, and debases the world. "Human speech conceals far more than it confides; it blurs much more than it defines; it distances more than it connects,"[13] was George Steiner's conclusion.

More concretely, the essence of learning a language is learning a system, a model, that shapes and controls speaking. It is easier still to

see ideology on this level, where due to the essential arbitrariness of the phonological, syntactic, and semantic rules of each, every human language must be learned. The unnatural is imposed, as a necessary moment of reproducing an unnatural world.

Even in the most primitive languages, words rarely bear a recognizable similarity to what they denote; they are purely conventional.[14] Of course this is part of the tendency to see reality symbolically, which Cioran referred to as the "sticky symbolic net" of language, an infinite regression which cuts us off from the world.[15] The arbitrary, self-contained nature of language's symbolic organization creates growing areas of false certainty where wonder, multiplicity and non-equivalence should prevail. Barthes' depiction of language as "absolutely terrorist" is much to the point here; he saw that its systematic nature "in order to be complete needs only to be valid, and not to be true."[16] Language effects the original split between wisdom and method.

Along these lines, in terms of structure, it is evident that "freedom of speech" does not exist; grammar is the invisible "thought control" of our invisible prison. With language we have already accommodated ourselves to a world of unfreedom.

Reification, the tendency to take the conceptual as the perceived and to treat concepts as tangible, is as basic to language as it is to ideology. Language represents the mind's reification of its experience, that is, an analysis into parts which, as concepts, can be manipulated as if they were objects. Horkheimer pointed out that ideology consists more in what people are like––their mental constrictedness, their complete dependence on associations provided for them––than in what they believe. In a statement that seems as pertinent to language as to ideology, he added that people experience everything only within the conventional framework of concepts.[17]

It has been asserted that reification is necessary to mental functioning, that the formation of concepts which can themselves be mistaken for living properties and relationships does away with the otherwise almost intolerable burden of relating one experience to another.

Cassirer said of this distancing from experience, "Physical reality seems to reduce in proportion as man's symbolic activity advances."[18] Representation and uniformity begin with language, reminding us of Heidegger's insistence that something extraordinarily important has been forgotten by civilization.

Civilization is often thought of not as a forgetting but as a remembering, wherein language enables accumulated knowledge to be transmitted forward, allowing us to profit from others' experiences

as though they were our own. Perhaps what is forgotten is simply that others' experiences are *not* our own, that the civilizing process is thus a vicarious and inauthentic one. When language, for good reason, is held to be virtually coterminous with life, we are dealing with another way of saying that life has moved progressively farther from directly lived experience.

Language, like ideology, mediates the here and now, attacking direct, spontaneous connections. A descriptive example was provided by a mother objecting to the pressure to learn to read: "Once a child is literate, there is no turning back. Walk through an art museum. Watch the literate adults read the title cards before viewing the paintings to be sure that they know what to see. Or watch them read the cards and ignore the paintings entirely.... As the primers point out, reading opens doors. But once those doors are open it is very difficult to see the world without looking through them."[19]

The process of transforming all direct experience into the supreme symbolic expression, language, monopolizes life. Like ideology, language conceals and justifies, compelling us to suspend our doubts about its claim to validity. It is at the root of civilization, the dynamic code of civilization's alienated nature. As the paradigm of ideology, language stands behind all of the massive legitimation necessary to hold civilization together. It remains for us to clarify what forms of nascent domination engendered this justification, made language necessary as a basic means of repression.

It should be clear, first of all, that the arbitrary and decisive association of a particular sound with a particular thing is hardly inevitable or accidental. Language is an invention for the reason that cognitive processes must precede their expression in language. To assert that humanity is only human because of language generally neglects the corollary that being human is the precondition of inventing language.[20]

The question is how did words first come to be accepted as signs at all? How did the first symbol originate? Contemporary linguists seem to find this "such a serious problem that one may despair of finding a way out of its difficulties."[21] Among the more than ten thousand works on the origin of language, even the most recent admit that the theoretical discrepancies are staggering. The question of when language began has also brought forth extremely diverse opinions.[22] There is no cultural phenomenon that is more momentous, but no other development offers fewer facts as to its beginnings. Not surprisingly, Bernard Campbell is far from alone in his judgment that "We simply do not know, and never will, how or when language began."[23]

Many of the theories that have been put forth as to the origin of language are trivial; they explain nothing about the qualitative,

intentional changes introduced by language. The "ding-dong" theory maintains that there is somehow an innate connection between sound and meaning; the "pooh-pooh" theory holds that language at first consisted of ejaculations of surprise, fear, pleasure, pain, etc.; the "ta-ta" theory posits the imitation of bodily movements as the genesis of language, and so on among "explanations" that only beg the question. The hypothesis that the requirements of hunting made language necessary, on the other hand, is easily refuted; animals hunt together without language, and it is generally necessary for humans to remain silent in order to hunt.

Somewhat closer to the mark, I believe, is the approach of contemporary linguist E.H. Sturtevant: since all intentions and emotions are involuntarily expressed by gesture, look, or sound, voluntary communication, such as language, must have been invented for the purpose of lying or deceiving.[24] In a more circumspect vein, the philosopher Caws insisted that "truth...is a comparative latecomer on the linguistic scene, and it is certainly a mistake to suppose that language was invented for the purpose of telling it."[25]

But it is in the specific social context of our exploration, the terms and choices of concrete activities and relationships, that more understanding of the genesis of language must be sought. Olivia Vlahos judged that the "power of words" must have appeared very early; "Surely...not long after man had begun to fashion tools shaped to a special pattern."[26] The flaking or chipping of stone tools, during the million or two years of Paleolithic life, however, seems much more apt to have been shared by direct, intimate demonstration than by spoken directions.

Nevertheless, the proposition that language arose with the beginnings of technology––that is, in the sense of division of labor and its concomitants, as a standardizing of things and events and the effective power of specialists over others––is at the heart of the matter, in my view. It would seem very difficult to disengage the division of labor––"the source of civilization,"[27] in Durkheim's phrase––from language at any stage, perhaps least of all the beginning. Division of labor necessitates a relatively complex control of group action; in effect it demands that the whole community be organized and directed. This happens through the breakdown of functions previously performed by everybody, into a progressively greater differentiation of tasks, and hence of roles and distinctions.

Whereas Vlahos felt that speech arose quite early, in relation to simple stone tools and their reproduction, Julian Jaynes has raised perhaps a more interesting question which is assumed in his contrary opinion that language showed up much later. He asks, how it is, if humanity had speech for a couple of million years, that there was

virtually no development of technology?[28] Jaynes's question implies a utilitarian value inhering in language, a supposed release of latent potentialities of a positive nature.[29] But given the destructive dynamic of the division of labor, referred to above, it may be that while language and technology are indeed linked, they were in fact both successfully resisted for thousands of generations.

At its origins language had to meet the requirements of a problem that existed outside language. In light of the congruence of language and ideology, it is also evident that as soon as a human spoke, he or she was separated. This rupture is the moment of dissolution of the original unity between humanity and nature; it coincides with the initiation of division of labor. Marx recognized that the rise of ideological consciousness was established by the division of labor; language was for him the primary paradigm of "productive labor." Every step in the advancement of civilization has meant added labor, however, and the fundamentally alien reality of productive labor/work is realized and advanced via language. Ideology receives its substance from division of labor, and, inseparably, its form from language.

Engels, valorizing labor even more explicitly than Marx, explained the origin of language from and with labor, the "mastery of nature." He expressed the essential connection by the phrase," first labor, after it and then with it speech."[30] To put it more critically, the artificial communication which is language was and is the voice of the artificial separation which is (division of) labor.[31] (In the usual, repressive parlance, this is phrased positively, of course, in terms of the invaluable nature of language in organizing "individual responsibilities.")

Language was elaborated for the suppression of feelings; as the code of civilization it expresses the sublimation of Eros, the repression of instinct, which is the core of civilization. Freud, in the one paragraph he devoted to the origin of language, connected original speech to sexual bonding as the instrumentality by which work was made acceptable as "an equivalence and substitute for sexual activity."[32] This transference from a free sexuality to work is original sublimation, and Freud saw language constituted in the establishing of the link between mating calls and work processes.

The neo-Freudian Lacan carries this analysis further, asserting that the unconscious is formed by the primary repression of acquisition of language. For Lacan the unconscious is thus "structured like a language" and functions linguistically, not instinctively or symbolically in the traditional Freudian sense.[33]

To look at the problem of origin on a figurative plane, it is interesting to consider the myth of the Tower of Babel. The story of the confounding of language, like that other story in Genesis, the Fall from the grace of

the Garden, is an attempt to come to terms with the origin of evil. The splintering of an "original language" into mutually unintelligible tongues may best be understood as the emergence of symbolic language, the eclipse of an earlier state of more total and authentic communication. In numerous traditions of paradise, for example, animals can talk and humans can understand them.[34]

I have argued elsewhere[35] that the Fall can be understood as a fall into time. Likewise, the failure of the Tower of Babel suggests, as Russell Fraser put it, "the isolation of man in historical time."[36] But the Fall also has a meaning in terms of the origin of language. Benjamin found in it the mediation which is language and the "origin of abstraction, too, as a faculty of language-mind."[37] "The fall is into language," according to Norman O. Brown.[38]

Another part of Genesis provides Biblical commentary on an essential of language, names,[39] and on the notion that naming is an act of domination. I refer to the creation myth, which includes "and whatsoever Adam called every living creature, that was the name thereof." This bears directly on the necessary linguistic component of the domination of nature: man became master of things only because he first named them, in the formulation of Dufrenne.[40] As Spengler had it, "To name anything by a name is to win power over it."[41]

The beginning of humankind's separation from and conquest of the world is thus located in the naming of the world. *Logos* itself as god is involved in the first naming, which represents the domination of the deity. The well-known passage is contained in the Gospel of John: "In the beginning was the Word, and the Word was with God, and the Word was God."

Returning to the question of the origin of language in real terms, we also come back to the notion that the problem of language is the problem of civilization. The anthropologist Lizot noted that the hunter-gatherer mode exhibited that lack of technology and division of labor that Jaynes felt must have bespoken an absence of language: "[Primitive people's] contempt for work and their disinterest in technological progress per se are beyond question."[42] Furthermore, "the bulk of recent studies," in Lee's words of 1981, shows the hunter-gatherers to have been "well nourished and to have [had] abundant leisure time."[43]

Early humanity was not deterred from language by the pressures of constant worries about survival; the time for reflection and linguistic development was available but this path was apparently refused for many thousands of years. Nor did the conclusive victory of agriculture, civilization's cornerstone, take place (in the form of the Neolithic revolution) because of food shortage or population pressures. In fact, as Lewis Binford has concluded, "The question to be asked is not

why agriculture and food-storage techniques were not developed everywhere, but why they were developed at all."[44]

The dominance of agriculture, including property ownership, law, cities, mathematics, surplus, permanent hierarchy and specialization, and writing, to mention a few of its elements, was no inevitable step in human "progress"; neither was language itself. The reality of pre-Neolithic life demonstrates the degradation or defeat involved in what has been generally seen as an enormous step forward, an admirable transcending of nature, etc. In this light, many of the insights of Horkheimer and Adorno in the *Dialectic of Enlightenment* (such as the linking of progress in instrumental control with regression in affective experience) are made equivocal by their false conclusion that "Men have always had to choose between their subjugation to nature or the subjugation of nature to the Self."[45]

"Nowhere is civilization so perfectly mirrored as in speech,"[46] as Pei commented, and in some very significant ways language has not only reflected but determined shifts in human life. The deep, powerful break that was announced by the birth of language prefigured and overshadowed the arrival of civilization and history, a mere 10,000 years ago. In the reach of language, "the whole of History stands unified and complete in the manner of a Natural Order,"[47] says Barthes.

Mythology, which, as Cassirer noted, "is from its very beginning potential religion,"[48] can be understood as a function of language, subject to its requirements like any ideological product. The nineteenth-century linguist Müller described mythology as a "disease of language" in just this sense; language deforms thought by its inability to describe things directly. "Mythology is inevitable, it is natural, it is an inherent necessity of language.... [It is] the dark shadow which language throws upon thought, and which can never disappear till language becomes entirely commensurate with thought, which it never will."[49]

It is little wonder, then, that the old dream of a *lingua Adamica*, a "real" language consisting not of conventional signs but expressing the direct, unmediated meaning of things, has been an integral part of humanity's longing for a lost primeval state. As remarked upon above, the Tower of Babel is one of the enduring significations of this yearning to truly commune with each other and nature.

In that earlier (but long enduring) condition nature and society formed a coherent whole, interconnected by the closest bonds. The step from participation in the totality of nature to religion involved a detaching of forces and beings into outward, inverted existences. This separation took the form of deities, and the religious practitioner, the shaman, was the first specialist.

The decisive mediations of mythology and religion are not, however,

the only profound cultural developments underlying our modern estrangement. Also in the Upper Paleolithic era, as the species Neanderthal gave way to Cro-Magnon (and the brain actually shrank in size), art was born. In the celebrated cave paintings of roughly 30,000 years ago is found a wide assortment of abstract signs; the symbolism of late Paleolithic art slowly stiffens into the much more stylized forms of the Neolithic agriculturalists. During this period, which is likely either synonymous with the beginnings of language or registers its first real dominance, a mounting unrest surfaced. John Pfeiffer described this in terms of the erosion of the egalitarian hunter-gatherer traditions, as Cro-Magnon established its hegemony.[50] Whereas there was "no trace of rank" until the Upper Paleolithic, the emerging division of labor and its immediate social consequences demanded a disciplining of those resisting the gradual approach of civilization. As a formalizing, indoctrinating device, the dramatic power of art fulfilled this need for cultural coherence and the continuity of authority. Language, myth, religion and art thus advanced as deeply "political" conditions of social life, by which the artificial media of symbolic forms replaced the directly-lived quality of life before division of labor. From this point on, humanity could no longer see reality face to face; the logic of domination drew a veil over play, freedom, affluence.

At the close of the Paleolithic Age, as a decreased proportion of verbs in the language reflected the decline of unique and freely chosen acts in consequence of division of labor, language still possessed no tenses.[51] Although the creation of a symbolic world was the condition for the existence of time, no fixed differentiations had developed before hunter-gatherer life was displaced by Neolithic farming. But when every verb form shows a tense, language is "demanding lip service to time even when time is furthest of our thoughts."[52] From this point one can ask whether time exists apart from grammar. Once the structure of speech incorporates time and is thereby animated by it at every expression, division of labor has conclusively destroyed an earlier reality. With Derrida, one can accurately refer to "language as the origin of history."[53] Language itself is a repression, and along its progress repression gathers––as ideology, as work––so as to generate historical time. Without language all of history would disappear.

Pre-history is pre-writing; writing of some sort is the signal that civilization has definitively arrived. "One gets the impression," Freud wrote in *The Future of an Illusion*, "that civilization is something that was imposed on a resisting majority by a minority which understood how to obtain possession of the means of power and coercion."[54] If the matter of time and language can seem problematic, writing as a stage of language makes its appearance contributing to subjugation in rather naked

fashion. Freud could have legitimately pointed to written language as the lever by which civilization was imposed and consolidated.

By about 10,000 B.C. extensive division of labor had produced the kind of social control reflected by cities and temples. The earliest writings are records of taxes, laws, terms of labor servitude. This objectified domination thus originated from the practical needs of political economy. An increased use of letters and tablets soon enabled those in charge to reach new heights of power and conquest, as exemplified in the new form of government commanded by Hammurabi of Babylon. As Lévi-Strauss put it, writing "seems to favor rather the exploitation than the enlightenment of mankind.... Writing, on this its first appearance in our midst, had allied itself with falsehood."[55]

Language at this juncture becomes the representation of representation, in hieroglyphic and ideographic writing and then in phonetic alphabetic writing. The progress of symbolization, from the symbolizing of words, to that of syllables, and finally to letters in an alphabet, imposed an increasingly irresistible sense of order and control. And in the reification that writing permits, language is no longer tied to a speaking subject or community of discourse, but creates an autonomous field from which every subject can be absent.[56]

In the contemporary world, the avant-garde of art has, most noticeably, performed at least the gestures of refusal of the prison of language. Since Mallarmé, a good deal of modernist poetry and prose has moved against the taken-for-grantedness of normal speech. To the question "Who is speaking?" Mallarmé answered, "Language is speaking."[57] After this reply, and especially since the explosive period around World War I when Joyce, Stein and others attempted a new syntax as well as a new vocabulary, the restraints and distortions of language have been assaulted wholesale in literature. Russian futurists, Dada (e.g. Hugo Ball's effort in the 1920s to create "poetry without words"), Artaud, the Surrealists and lettristes were among the more exotic elements of a general resistance to language.[58]

The Symbolist poets, and many who could be called their descendants, held that defiance of society also includes defiance of its language. But inadequacy in the former arena precluded success in the latter, bringing one to ask whether avant-garde strivings can be anything more than abstract, hermetic gestures. Language, which at any given moment embodies the ideology of a particular culture, must be ended in order to abolish both categories of estrangement; a project of some considerable social dimensions, let us say. That literary texts (e.g. *Finnegan's Wake*, the poetry of e.e. cummings) break the rules of language seems mainly to have the paradoxical effect of evoking the rules themselves. By permitting the free play of ideas about language,

society treats these ideas as mere play.

The massive amount of lies––official, commercial and otherwise––is perhaps in itself sufficient to explain why Johnny Can't Read or Write, why illiteracy is increasing in the metropole. In any case, it is not only that "the pressure on language has gotten very great,"[59] according to Canetti, but that "unlearning" has come "to be a force in almost every field of thought,"[60] in Robert Harbison's estimation.

Today "incredible" and "awesome" are applied to the most commonly trivial and boring, and it is no accident that powerful or shocking words barely exist anymore. The deterioration of language mirrors a more general estrangement; it has become almost totally external to us. From Kafka to Pinter silence itself is a fitting voice of our times. "Few books are forgivable. Black on the canvas, silence on the screen, an empty white sheet of paper, are perhaps feasible,"[61] as R.D. Laing put it so well. Meanwhile, the structuralists and post-structuralists––Lévi-Strauss, Barthes, Foucault, Lacan, Derrida––have been almost entirely occupied with the duplicity of language in their endless exegetical burrowings into it. They have virtually renounced the project of extracting meaning from language.

I am writing (obviously) enclosed in language. aware that language reifies the resistance to reification. As T.S. Eliot's Sweeney explains, "I've gotta use words when I talk to you." One can imagine replacing the imprisonment of time with a brilliant present––only by imagining a world without division of labor, without that divorce from nature from which all ideology and authority accrue. We couldn't live in this world without language and that is just how profoundly we must transform this world.

Words bespeak a sadness; they are used to soak up the emptiness of unbridled time. We have all had the desire to go further, deeper than words, the feeling of wanting only to be done with all talk, knowing that being allowed to live coherently erases the need to formulate coherence.

There is a profound truth to the notion that "lovers need no words." The point is that we must have a world of lovers, a world of the face-to-face, in which even names can be forgotten, a world which knows that enchantment is the opposite of ignorance. Only a politics that undoes language and time and is thus visionary to the point of voluptuousness has any meaning.

ENDNOTES

1. Claude Lévi-Strauss, *The Savage Mind* (Chicago, 1966), p. 245.
2. Theodor W. Adorno, *Minima Moralia* (London, 1974), p. 72.

3. Friedrich Nietzsche, *The Will to Power* (New York, 1967), p. 428.
4. Paul A. Gaeng, *Introduction to the Principles of Language* (New York, 1971), p. 1.
5. Rosalind Coward and John Ellis, *Language and Materialism: Developments in Semiology and the Theory of the Subject* (London, 1977), p. 1.
6. Hans-George Gadamer, *Truth and Method* (New York, 1982), p. 340. Also, Susanne K. Langer, *Philosophy in a New Key* (Cambridge, 1980), p. 103: "Language is, without a doubt, the most momentous and at the same time mysterious product of the human mind."
7. A.S. Diamond, *The History and Origin of Language* (New York, 1959), p. 6. The physicist-philosopher David Bohm has proposed a new model of language called the "rheomode," aimed at reversing this development by re-establishing the primacy of the verb. His aim is to reduce the subject-object split, so pronounced in the West since Descartes and increasingly an area of contestation by other such "holistic" scientists as well, such as Fritjof Capra and David Dossey.
8. Benjamin Lee Whorf, "Science and Linguistics," S.I. Hayakawa, ed., *Language in Action* (New York, 1941), pp. 311-313.
9. H.E.L. Melleresh, *The Story of Early Man* (New York, 1960), pp. 106-107.
10. Arnold J. Toynbee, *A Study of Early Man* (New York, 1947), p. 198.
11. Ernst Cassirer, *An Essay on Man* (New Haven, 1944), p. 135.
12. It may be worth referring here to the hermeneutic motto that "Man is language," expressive of the drift toward a "linguistic" phenomenology with Heidegger and Ricoeur. In *Being and Time* Heidegger specifically maintains that perception becomes what it is only with respect to the fundamental context of language, and Ricoeur finds that all experience is already mediated via a world of symbols. See Don Ihde, *Existential Technics* (Albany, 1983), p. 145.
13. George Steinber, *After Babel: Aspects of Language and Translation* (New York, 1975), p. 229.
14. "...words, symbolic and wholly unlike their objects." Geoge Santayana, *Dominations and Powers* (New York, 1951), p. 143.
15. E.M. Cioran, *The Fall into Time* (Chicago, 1979), p. 12.
16. Roland Barthes, "Literature and Signification," *Cultural Essays* (Evanston, 1972), p. 278.
17. Max Horkheimer, "The End of Reason," Andrew Arato and Eike Gebhardt, eds., *The Essential Frankfurt School Reader* (New York, 1978), p. 47.
18. Cassirer, *op. cit.*, p. 25.
19. Mayra Bloom, "Don't Teach Your Baby to Read" (letter to editor), *Co-Evolution Quarterly* (Winter 1981), p. 102.
20. The fairly extensive literature on the supposed ability of animals to learn language is not relevant here; the efficacy of training primates or others only demonstrates that it is possible to domesticate them. The nature and origin of language as domestication is not thereby addressed.
21. Noam Ziv and Jagdish N. Hattiangad, "Essence vs. Evolution in Language," *Word: Journal of the International Linguistics Association* (August 1982), p. 86.
22. "The beginning of communication by symbolic languages in mankind cannot be dated, even approximately." Vanne Goodall, *The Quest for Man* (New York, 1975), p. 203.
23. Bernard Campbell, *Mankind Emerging* (Boston, 1976), p. 193.
24. "Speech was given to man to disguise his thoughts." Appropriately, this quote is attributed to Talleyrand, diplomat and statesman (1754–1838).
25. Peter Caws, "The Structure of Discovery," *Science* No. 166 (169), p. 1380.

26. Olivia Vlahos, *Human Beginnings* (New York, 1966), p. 140.
27. Emile Durkheim, *Division of Labor in Society* (Glencoe, 1960), p. 50.
28. Julian Jaynes, *The Origins of Consciousness in the Breakdown of the Bicameral Mind* (Boston, 1976), p. 130.
29. Jaynes sees language emerging no sooner than the Upper Paleolithic age (c. 40,000 B.C.), when stone tool technology experienced an accelerated development. But even among those whose conception of language puts its emergence at a vastly earlier epoch, the late Stone Age is understood as pivotal, e.g. "whatever the state of language before the Upper Paleolithic, it must have undergone spectacular changes afterwards." John E. Pfeiffer, *The Creative Explosion* (New York, 1982), p. 71.
30. Frederick Engels, *The Part Played by Labor in the Transition from Ape to Man* (Peking, 1975), pp. 4-6.
31. This is not to deny there is some division based on sexual differentiation. But ascribing too great a role to the sexual division of labor would also be a mistake, one which seems to be routinely made. Consider the apparently contradictory two sentences by which a leading anthropologist sums up the matter: "The division of labor by sex is virtually universal. Men hunt and gather; women primarily gather and hunt small game; both sexes fish and gather shellfish." Richard B. Lee, "Is there a Foraging Mode of Production?" *California Journal of Anthropology* (Spring 1981), p. 15.
32. Sigmund Freud, *The Standard Edition of the Complete Psychological Works of Sigmund Freud* (London, 1953-1974), Vol. 15, p. 167.
33. Jacques Lacan, *The Function of Language in Psychoanalysis* (Baltimore, 1968).
34. Mircea Eliade, *Shamanism* (Princeton, 1964), p. 99.
35. John Zerzan, "Beginning of Time, End of Time", *Fifth Estate* (Summer 1983).
36. Russell Fraser, *The Language of Adam* (New York, 1977), p. 1.
37. Walter Benjamin, "On Language as Such and on the Language of Man," *Reflections* (New York, 1978), p. 328.
38. Norman O. Brown, *Love's Body* (New York, 12966), p. 257.
39. "...a name is the vastest generative idea that was ever conceived." Langer, *op.cit*., p. 142.
40. Mikel Dufrenne, *Language & Philosophy 7* (Bloomington, 1963), p. 101.
41. Oswald Spengler, *The Decline of the West* Vol. I. (New York, 1929), p. 123. "Animals do not realize that we name them. Or else they do realize it, and that may be why they fear us." Elias Canetti, *The Human Province* (New York, 1978), p. 14.
42. Quoted by Pierre Clastres, *Society Against the State* (New York, 1977), p. 166.
43. R.B. Lee, *op. cit.*, p. 14.
44. Quoted by David R. Harris, "Alternative Pathways Toward Agriculture," Charles A. Reed, ed., *Origins of Agriculture* (The Hague, 1977), pp. 180-181.
45. Max Horkheimer and Theodor W. Adorno, *Dialectic of Nature* (New York, 1972), p. 32.
46. Mario Pei, *The Story of Language* (Philadelphia, 1965), p. 199
47. Roland Barthes, *Writing Degree Zero* (New York, 1968), p. 10.
48. Cassirer, *op. cit*., p. 87
49. Max Müller, "The Philosophy of Mythology," addendum to *Introduction to the Science of Religion* (London, 1873), p. 353.
50. Pfeiffer, *op. cit*., chapters 8, 9.
51. Diamond, *op. cit*., p. 267.
52. Willard Van Orman Quine, *Word and Object* (New York, 1960), p. 170.
53. Jacques Derrida, *Writing and Difference* (Chicago, 1978), p. 4.

54. Sigmund Freud, *The Future of an Illusion* (New York, 1955), p. 10.
55. Claude Lévi-Strauss, *Tristes Tropiques* (New York, 1961), pp. 292, 293.
56. Jacques Derrida, *Edmund Husserl's Origin of Geometry* (Stony Brook, New York, 1978), pp. 87-88.
57. Eugenio Trias, *Philosophy and its Shadow* (New York, 1983), p. 74.
58. It is noteworthy that this literary revolt against language has coincided with a very significant resistance to time as well. Proust, Joyce, Dos Passos, Faulkner, Gide, Virginia Woolf, Borges, among others, have all tried to challenge the given dimension of time.
59. Elias Canetti, *The Conscience of Words* (New York, 1979), p. 142.
60. Robert Harbison, *Deliberate Regression* (New York, 1980), p. xvi.
61. R.D. Laing, *The Politics of Experience* (New York, 1967), p. 11.

Special thanks to Alice Parman for assistance throughout.

TOO MARVELOUS FOR WORDS
LANGUAGE BRIEFLY REVISITED

A few years ago the now-deceased philosopher of science and anarchist Paul Feyerabend was invited to sign a petition being circulated by well-known European thinkers. Its thrust was that society is in need of input from philosophers, who draw upon the "intellectual treasures" of the past. In these dark times, the petition concluded, "We need philosophy."

Derrida, Ricoeur and the other liberal concocters of the document were no doubt shocked by Feyerabend's negative reaction. He pointed out that philosophy's "treasures" were not meant as additions to ways of living, but were intended to express their replacement. "Philosophers," he explained, "have destroyed what they have found, much in the way that the [other] standard-bearers of Western civilization have destroyed indigenous cultures...."[1] Feyerabend wondered how civilized rationality––which has reduced a natural abundance of life and freedom and thereby devalued human existence––became so dominant. Perhaps its chief weapon is symbolic thought, with its ascendancy in the form of language. Maybe the wrong turn we took as a species can be located at that milestone in our evolution.

"Writing...can be seen to *cause a new reality to come into being*," according to Terence Hawkes, who adds that language "allows no single, unitary appeals to a 'reality' beyond itself. In the end, it constitutes its own reality."[2] An infinitely diverse reality is captured by finite language; it subordinates all of nature to its formal system. As Michael Baxandall put it, "Any language...is a conspiracy against experience in the sense of being a collective attempt to simplify and arrange experience into manageable parcels."[3]

At the beginning of domination and repression, the start of the long process of depleting the riches of the living world, is a very ill-advised separation from the flow of life. What was once freely given is now controlled, rationed, distributed. Feyerabend refers to the effort, especially by specialists, to "reduce the abundance that surrounds and confuses them."[4]

The essence of language is the symbol. Always a substitution. Always a paler re-presentation of what is at hand, what presents itself directly to us. Susanne Langer pondered the mysterious nature of symbols: "If the word 'plenty' were replaced by a succulent, real, ripe peach, few people could attend to the mere content of the word. The more barren and indifferent the symbol, the greater its semantic power. Peaches are too good to act as words; we're too much interested in peaches themselves."[5]

For the Murngin people of northern Australia, name giving and all other such linguistic externalizations are treated as a kind of death, the loss of an original wholeness. This is very much to the point of what language itself accomplishes. In slightly more general terms, Ernest Jones proposed that "only what is repressed is symbolized; only what is repressed needs to be symbolized."[6]

Any symbolic mode is only one way of seeing and connecting. By reversing our steps, in light of what has been progressively de-realized or lost, it appears likely that before the symbolic dimension took over, relations between people were more subtle, unmediated, and sensual. But this is a forbidden notion. Commonplace statements like: "Verbal language was perhaps the greatest technical invention [!] of human life" and "Language enables human beings to communicate and share with each other" deny, incredibly, that communication, sharing, society didn't exist before the symbolic, which was such a relative late-comer on the evolutionary scale. (It appeared an estimated 35,000 years ago, following nearly two million years of successful human adaptations to life on earth.) Such formulations express perfectly the hubris, imperialism and ignorance of symbolic thought.

We don't know when speech originated; but soon after domestication gained the upper hand over foraging or gatherer-hunter life, writing appeared. By about 4500 B.C. engraved clay tokens, records of agricultural transactions and inventories, became widespread in the Middle East. Five thousand years later, the Greek perfection of the alphabet completed the transition to modern writing systems.

The singular excellence of modern humanshas of course become a basic tenet of civilization's ideology. It extends, for example, to Sapir's definition of personality as a systematic psychological organization depending on constellations of symbols.[7] The symbolic medium of language is now widely felt as an all-defining imprisonment, rather than a liberatory triumph. A great deal of philosophical analysis in the past century revolves around this realization, though we can hardly imagine breaking free of it or even clearly recognizing its pervasive presence and influence. This is a measure of the depth of the impoverishing logic that Feyerabend sought to understand.Certainly it is no small endeavor to try to imagine what human cognition may have been like, before language

and symbolic thought took possession of so much of our consciousness.

It is grammar that establishes language as a system, reminding us that the symbolic must become systemic in order to seize and hold power. This is how the perceived world becomes structured, its abundance processed and reduced. The grammar of every language is a theory of experience, and more than that, it's an ideology. It sets rules and limits, and grinds the one-prescription-fits-all lenses through which we see everything. A language is defined by grammatical rules (not of the speaker's choosing); the human mind is now commonly seen as a grammar- or syntax-driven machine. As early as the 1700s, human nature was described as "a tissue of language,"[8] a further measure of the hegemony of language as the determining ground of consciousness.

Language, and symbolism in general, are always substitutive, implying meanings that cannot be derived directly from experiential contexts. Here is the long-ago source of today's generalized crisis of meaning. Language initiates and reproduces a distinction or separation that leads to ever-increasing place-lessness. Resistance to this impoverishing movement must lead to the problematization of language. Foucault noted that speech is not merely "a verbalization of conflicts and systems of domination, but…the very object of man's conflicts."[9] He didn't develop this point, which is valid and deserves our attention and study. The roots of today's globalizing spiritual crisis lie in a movement away from immediacy; this is the hallmark of the symbolic.

Civilization has made repeated, futile efforts to overcome the instability and erosion of substance caused by the rule of the symbolic. Among the most well-known was Descartes' attempt to give "grounding" to science and modernity in the 17th century. His famous mind-body duality provides a philosophical method (based on suppression of the body, of course) that we have suffered from ever since. He claimed certainty for the system by means of the language of number, as expressed in his analytic geometry. But the dream of certainty has been consistently revealed as a further repressive substitute: an illusory foundation on which domination has extended itself in every direction.

Language is conformist in the profoundest sense; even objective reality yields to its pressure. The so-called factual is brought to dissolution, because it is shaped and constrained by the limits of language. Under its reductive force, we forget that we don't need symbols to be present to meaning. The reality of pre-linguistic social practices is screened from us by more than the practical, empirical limitations of access to time past. Primal existence has been ruled irrelevant, and indigenous lifeways are everywhere under siege, because of civilization's pervasive over-valuation of the symbolic.

Yet an exploration of social life in the early symbolic epoch need not

be overly speculative, and may reveal important connections. We know from archaeological and ethnographic evidence that early on in divided society, inequality was often based on ritual knowledge: who possessed it, who did not. The symbolic must have already been very much present and determinant; or why wouldn't inequality be based on, say, knowledge of plants?

It could well be that language emerged from ritual, which among other attributes, is a substitutive form of emotion. The dissociated, symbolic process of ritual activity parallels that of language and may have first generated it: emotionally displaced expression, abstracted cries; language as ritualized expression.

From early on, ritual has mystified power relationships. Deacon has argued that language became necessary to enable the contracts on which society depends.[10] However, it is more than likely that social life long predated language. Contracts based on language may have appeared to meet some challenge in society, such as the beginnings of disequilibrium or inequality.

At a later stage, religion was a further (and even less successful) response to problems and tensions in human communities. Language was central there, too. Word magic runs through the history of religions; veneration of names and naming is common (the history of religious life in Ancient Egypt is a well-documented example).[11]

Problems introduced by complexity or hierarchy have never been resolved by symbolic means. What is overcome symbolically remains intact on the non-symbolic (real) plane. Symbolic means sidestep reality; they are part of what is going wrong. Division of labor, for instance, eroded face-to-face interaction and eroded people's direct, intimate relationship with the natural world. The symbolic is complicit; it generates more and more mediations to accompany those created by social practices. Life becomes fragmented; connections to nature are obscured and dissolved. Instead of repairing the rupture, symbolic thought turns people in the wrong direction: toward abstraction. The "thirst for transcendence" is initiated, ignoring the shifting reality that created that desire in the first place. Language plays a key role here, re-ordering and subordinating natural systems that humankind was once attuned to. Symbolic culture demands that we reject our "animal nature" in favor of a symbolically defined "human nature".

Now we live our everyday lives in a world system that is ever more symbolic and disembodied. Even economies are decisively symbolic; and we are told that the social bond (what's left of it) is essentially linguistic. Language was an intrusion that brought on a series of transformations resulting in our loss of the world. Once, as Freud put it, "the whole world was animate,"[12] known by all in a full, engaged way. Later the totem

animal was replaced by a god, a signpost of the advancing symbolic. (I am reminded that indigenous elders who are asked to make audio or video recordings often decline, insisting that what they say must be communicated in person, face to face.)

Language was a powerful instrument for technological and social disenchantment. Like every symbolic device, it was itself an invention. But it does not establish or generate meaning, which antedates language. Rather, it confines and distorts meaning, via the rules of symbolic representation––the architecture of the logic of control. Domestication also partakes of this underlying orientation, which has served domination in key ways. Language has a standardizing quality; this develops in tandem with the technological development it facilitates. The printing press, for example, suppressed dialects and other language variants, creating unified standards for exchange and communication. Literacy has always served economic development, and aimed to bolster the cohesion so necessary for the nation-state and nationalism.

Language is a productive force; like technology, it is not amenable to social control. In the postmodern era, both language and technology rule, but each shows signs of exhaustion. Today's symbolic reflects nothing much more than the habit of power behind it. Human connectedness and corporeal immediacy have been traded away for a fading sense of reality. The poverty and manipulation of mass communication is the postmodern version of culture. Here is the voice of industrial modernity as it goes cyber/digital/ virtual, mirroring its domesticated core, a facet of mass production.

Language does not bestow presence; rather, it banishes presence and its transparency. We are "condemned to words," said Marlene Nourbese Philip. She provides a wonderful metaphor of origins:

> God first created silence: whole, indivisible,
> complete. All creatures––man, woman, beast,
> insect, bird and fish––lived happily together
> with this silence, until one day man and woman
> lay down together and between them created
> the first word. This displeased God deeply
> and in anger she shook out her bag of words
> over the world, sprinkling and showering her
> creation with them. Her word store rained
> down upon all creatures, shattering forever the
> whole that once was silence. God cursed the
> world with words and forever after it would be
> a struggle for man and woman to return to the
> original silence.[13]

Dan Sperber wrote of an "epidemiology of representations"; his pathology metaphor is apt. He questioned why the symbolic spreads like an epidemic, why we are susceptible to it,[14] but left these questions unanswered.[15]

In the Age of Communication our homogenized symbolic "materials" prove so inadequate. Our isolation grows; what we have to communicate shrinks. How is it that the world and consciousness have come to be seem as mainly comprised of, and enclosed by, language? Does time structure language or does language structure time? So many questions, including the key one; how do we transcend, escape, get rid of the symbolic?

We may not yet know much about the how, but at least we know something of the why. In language, number, art, and the rest, a substitution essence has been the symbolic's bad bargain. This compensation fails to compensate for what is surrendered. Symbolic transactions deliver an arid, anti-spiritual dimension, emptier and colder with each re-enactment. This is nothing new; it's just more sadly oppressive and obvious, more corrosive of actual connectedness, particularity, non-programmed life. This strangling, unhappy state saps our vitality and will destroy us if we don't end it.

Representation is unfaithful even to itself. Geert Lovink concluded that "there is no 'natural' image anymore. All information has gone through the process of digitization. We just have to deal with the fact that we can no longer believe our eyes, our ears. Everyone who has worked with a computer will know this."[16] Discounted, atrophying senses to go along with the distancing and decontextualization.

George Steiner has announced a "core tiredness" as the climate of spirit today. The weight of language and the symbolic has brought this fatigue; the "shadows lengthen" and there is "valediction in the air."[17] A farewell is indeed appropriate. Growing illiteracy, cheapened channels of the symbolic (e.g. email)...a tattered dimension. The Tower of Babel, now built into cyberspace, has never been taller—but quite possibly never so weakly supported. Easier to bring down?

ENDNOTES

1. Paul Feyerabend, *Conquest of Abundance: A Tale of Abstraction versus the Richness of Being* (Chicago: University of Chicago Press, 1999), p. 270.
2. Terence H. Hawkes, *Structuralism and Semiotics* (London: Methuen, 1977), pp. 149, 26.
3. Michael Baxandall, *Giotto and the Orators* (Oxford: Clarendon Press, 1971), p. 44.
4. Paul Feyerabend, *Killing Time* (Chicago: University of Chicago Press, 1995), p. 179.

5. Susanne K. Langer, *Philosophy in a New Key* (Cambridge: Harvard University Press, 1942), p. 75.
6. Ernest Jones, cited in Dan Sperber, *Rethinking Symbolism* (Cambridge: Cambridge University Press, 1975), p. 43.
7. Edward Sapir, "The Emergence of the Concept of Personality in a Study of Cultures," *Journal of Social Psychology* 5 (1934), pp 408-415.
8. For example, Johann Gottfried Herder, *Treatise on the Origin of Language*.
9. Michel Foucault, *The Archaeology of Knowledge*, translated by A.M.Sheridan Smith (New York: Pantheon, 1972), p. 216.
10. Terrence W. Deacon, The Symbolic Species (New York: W.W. Norton, 1997), *passim*.
11. Ernst Cassirer, *Language and Myth* (New York: Dover, 1953), pp 45-49.
12. Sigmund Freud, *Moses and Monotheism*, The Standard Edition of the Complete Works (London: The Hogarth Press, 1964), p. 114.
13. Marlene Nourbese Philip, *Looking for Livingstone* (Stratford, Ontario: Mercury Press, 1991), p. 11.
14. Dan Sperber, "Anthropology and Psychology: Towards an Epidemiology of Representations," *Man* 20 (1985), pp 73-89.
15. The major rise in the incidence of autism is not metaphorical. Autism as a retreat from symbolic interaction seems to be a terrible commentary on its unfulfilling nature. It may not be coincidental that autism first appears in the medical literature in 1799, as the Industrial Revolution was taking off.
16. Geert Lovink, *Uncanny Networks* (Cambridge: The MIT Press, 2002), p. 260.
17. George Steiner, *Grammars of Creation* (New Haven: Yale University Press, 2001), p. 3.

NUMBER
ITS ORIGIN AND EVOLUTION

The wrenching and demoralizing character of the crisis we find ourselves in, above all, the growing emptiness of spirit and artificiality of matter, lead us more and more to question the most commonplace of "givens." Time and language begin to arouse suspicions; number, too, no longer seems "neutral." The glare of alienation in technological civilization is too painfully bright to hide its essence now, and mathematics is the schema of technology.

It is also the language of science––how deep must we go, how far back to reveal the "reason" for damaged life? The tangled skein of unnecessary suffering, the strands of domination, are unavoidably being unreeled, by the pressure of an unrelenting present.

When we ask, to what sorts of questions is the answer a number, and try to focus on the meaning or the reasons for the emergence of the quantitative, we are once again looking at a decisive moment of our estrangement from natural being.

Number, like language, is always saying what it cannot say. As the root of a certain kind of logic or method, mathematics is not merely a tool but a goal of scientific knowledge: to be perfectly exact, perfectly self-consistent, and perfectly general. Never mind that the world is inexact, interrelated, and specific, that no one has ever seen leaves, trees, clouds, animals that are any two the same, just as no two moments are identical.[1] As Dingle said, "All that can come from the ultimate scientific analysis of the material world is a set of numbers,"[2] reflecting upon the primacy of the concept of identity in math and its offspring, science.

A little further on I will attempt an "anthropology" of number and explore its social embeddedness. Horkheimer and Adorno point to the basis of the disease: "Even the deductive form of science reflects hierarchy and coercion...the whole logical order, dependency, progression, and union of [its] concepts is grounded in the corresponding conditions of social reality––that is, of the division of labor."[3]

If mathematical reality is the purely formal structure of normative or standardizing measure[4] (and later, science), the first thing to be

measured at all was time.[5] The primal connection between time and number becomes immediately evident. Authority, first objectified as time, becomes rigidified by the gradually mathematized consciousness of time. Put slightly differently, time is a measure and exists as a reification or materiality thanks to the introduction of measure.

The importance of symbolization should also be noted, in passing, for a further interrelation consists of the fact that while the basic feature of all measurement is symbolic representation,[6] the creation of a symbolic world is the condition of the existence of time.

To realize that representation begins with language, actualized in the creation of a reproducible formal structure, is already to apprehend the fundamental tie between language and number.[7] An impoverished present renders it easy to see, as language becomes more impoverished, that math is simply the most reduced and drained language. The ultimate step in formalizing a language is to transform it into mathematics; conversely, the closer language comes to the dense concretions of reality, the less abstract and exact it can be.

The symbolizing of life and meaning is at its most versatile in language, which, in Wittgenstein's later view, virtually constitutes the world. Further, language, based as it is on a symbolic faculty for conventional and arbitrary equivalencies, finds in the symbolism of math its greatest refinement. Mathematics, as judged by Max Black, is "the grammar of all symbolic systems."[8]

The purpose of the mathematical aspect of language and concept is the more complete isolation of the concept from the senses. Math is the paradigm of abstract thought for the same reason that Levy termed pure mathematics "the method of isolation raised to a fine art."[9] Closely related are its character of "enormous generality,"[10] as discussed by Parsons, its refusal of limitations on said generality, as formulated by Whitehead.[11]

This abstracting process and its formal, general results provide a content that seems to be completely detached from the thinking individual; the user of a mathematical system and his/her values do not enter into the system. The Hegelian idea of the autonomy of alienated activity finds a perfect application with mathematics; it has its own laws of growth, its own dialectic,[12] and stands over the individual as a separate power. Self-existent time and the first distancing of humanity from nature, it must be preliminarily added, began to emerge when we first began to count. Domination of nature, and then, of humans is thus enabled.

In abstraction is the truth of Heyting's conclusion that "the characteristic of mathematical thought is that it does not convey truth about the external world."[13] Its essential attitude toward the whole

colorful movement of life is summed up by, "Put this and that equal to that and this!"[14] Abstraction and equivalence or identity are inseparable; the suppression of the world's richness which is paramount in identity brought Adorno to call it "the primal world of ideology."[15] The untruth of identity is simply that the concept does not exhaust the thing conceived.[16]

Mathematics is reified, ritualized thought, the virtual abandonment of thinking. Foucault found that "in the first gesture of the first mathematician one saw the constitution of an ideality that has been deployed throughout history and has been questioned only to be repeated and purified."[17]

Number is the most momentous idea in the history of human thought. Numbering or counting (and measurement, the process of assigning numbers to represent qualities) gradually consolidated plurality into quantification, and thereby produced the homogeneous and abstract character of number, which made mathematics possible. From its inception in elementary forms of counting (beginning with a binary division and proceeding to the use of fingers and toes as bases) to the Greek idealization of number, an increasingly abstract type of thinking developed, paralleling the maturation of the time concept. As William James put it, "the intellectual life of man consists almost wholly in his substitution of a conceptual order for the perceptual order in which his experience originally comes."[18]

Boas concluded that "counting does not become necessary until objects are considered in such generalized form that their individualities are entirely lost sight of."[19] In the growth of civilization we have learned to use increasingly abstract signs to point at increasingly abstract referents. On the other hand, prehistoric languages had a plethora of terms for the touched and felt, while very often having no number words beyond *one*, *two*, and *many*.[20] Hunter-gatherer humanity had little if any need for numbers, which is the reason Hallpike declared that "we cannot expect to find that an operational grasp of quantification will be a cultural norm in many primitive societies."[21] Much earlier, and more crudely, Allier referred to "The repugnance felt by uncivilized men towards any genuine intellectual effort, more particularly towards arithmetic."[22]

In fact, on the long road toward abstraction, from an intuitive sense of amount to the use of different sets of number words for counting different kinds of things, along to fully abstract number, there was an immense resistance, as if the objectification involved was somehow seen for what it was. This seems less implausible in light of the striking, unitary beauty of tools of our ancestors half a million years ago, in which the immediate artistic and technical (for want of better words)

touch is so evident, and by "recent studies which have demonstrated the existence, some 300,000 years ago, of mental ability equivalent to modern man,"[23] in the words of British archeologist Clive Gamble.

Based on observations of surviving tribal peoples, it is apparent, to provide another case in point, that hunter-gatherers possessed an enormous and intimate understanding of the nature and ecology of their local places, quite sufficient to have inaugurated agriculture perhaps hundreds of thousands of years before the Neolithic revolution.[24] But a new kind of relationship to nature was involved; one that was evidently refused for so many, many generations.

To us it has seemed a great advantage to abstract from the natural relationship of things, whereas in the vast Stone Age being was apprehended and valued as a whole, not in terms of separable attributes.[25] Today, as ever, when a large family sits down to dinner and it is noticed that someone is missing, this is not done by counting. Or when a hut was built in prehistoric times, the number of required posts was not specified or counted, rather they were inherent to the idea of the hut, intrinsically involved in it.[26] (Even in early agriculture, the loss of a herd animal could be detected not by counting but by missing a particular face or characteristic features; it seems clear, however, as Bryan Morgan argues, that "man's first use for a number system" was certainly as a control of domesticated flock animals,[27] as wild creatures became products to be harvested.) In distancing and separation lies the heart of mathematics: the discursive reduction of patterns, states and relationships which we initially perceive as wholes.[28]

In the birth of categories aimed at control of what is free and unordered, crystallized by early counting, we see a new attitude toward the world. If naming is a distancing, a mastery, so too is number, which is impoverished naming. Though numbering is a corollary of language, it is the signature of a critical breakthrough of alienation. The root meanings of number are instructive: "quick to grasp or take" and "to take, especially to steal," also "taken, seized, hence...numb."[29] What is made an object of domination is thereby reified, becomes numb.

For hundreds of thousands of years hunter-gatherers enjoyed a direct, unimpaired access to the raw materials needed for survival. Work was not divided nor did private property exist. Dorothy Lee focused on a surviving example from Oceania, finding that none of the Trobrianders' activities are fitted into a linear, divisible line. "There is no job, no labor, no drudgery which finds its reward outside the act."[30] Equally important is the "prodigality," "the liberal customs for which hunters are properly famous," "their inclination to make a feast of everything on hand,"[31] according to Sahlins.

Sharing and counting or exchange are, of course, relative opposites.

Where articles are made, animals killed or plants collected for domestic use and not for exchange, there is no demand for standardized numbers or measurements. Measuring and weighing possessions develops later, along with the measurement and definition of property rights and duties to authority. Isaac locates a decisive shift toward standardization of tools and language in the Upper Paleolithic period,[32] the last stage of hunter-gatherer humanity. Numbers and less abstract units of measurement derive, as noted above, from the equalization of differences. Earliest exchange, which is the same as earliest division of labor, was indeterminate and defied systematization; a table of equivalencies cannot really be formulated.[33] As the predominance of the gift gave way to the progress of exchange and division of labor, the universal interchangeability of mathematics finds its concrete expression. What comes to be fixed as a principle of equal justice––the ideology of equivalent exchange––is only the practice of the domination of division of labor. Lack of a directly-lived existence, the loss of autonomy that accompany separation from nature are the concomitants of the effective power of specialists.

Mauss stated that any exchange can be defined only by defining all of the institutions of society.[34] Decades later Belshaw grasped division of labor as not merely a segment of society but the whole of it.[35] Likewise sweeping, but realistic, is the conclusion that a world without exchange or fractionalized endeavor would be a world without number.

Clastres, and Childe among others well before him, realized that people's ability to produce a surplus, the basis of exchange, does not necessarily mean that they decide to do so. Concerning the nonetheless persistent view that only mental/cultural deficiency accounts for the absence of surplus, "nothing is more mistaken," judged Clastres.[36] For Sahlins, "Stone Age economics" was "intrinsically an anti-surplus system,"[37] using the term system very loosely. For long ages humans had no desire for the dubious compensations attendant on assuming a divided life, just as they had no interest in number. Piling up a surplus of anything was unknown, apparently, before Neanderthal times passed to the Cro-Magnon; extensive trade contacts were nonexistent in the earlier period, becoming common thereafter with Cro-Magnon society.[38]

Surplus was fully developed only with agriculture, and characteristically the chief technical advancement of Neolithic life was the perfection of the container: jars, bins, granaries and the like.[39] This development also gives concrete form to a burgeoning tendency toward spatialization, the sublimation of an increasingly autonomous dimension of time into spatial forms. Abstraction, perhaps the first spatialization, was the first compensation for the deprivation caused by the sense of time. Spatialization was greatly refined with number and geometry.

Ricoeur notes that "Infinity is discovered…in the form of the idealization of magnitudes, of measures, of numbers, figures,"[40] to carry this still further. This quest for unrestricted spatiality is part and parcel of the abstract march of mathematics. So then is the feeling of being freed from the world, from finitude that Hannah Arendt described concerning mathematics.[41]

Mathematical principles and their component numbers and figures seem to exemplify a timelessness which is possibly their deepest character. Hermann Weyl, in attempting to sum up (no pun intended) the "life center of mathematics," termed it the science of the infinite.[42] How better to express an escape from reified time than by making it limitlessly subservient to space––in the form of math.

Spatialization––like math––rests upon separation; inherent in it are division and an organization of that division. The division of time into parts (which seems to have been the earliest counting or measuring) is itself spatial. Time has always been measured in such terms as the movement of the earth or moon, or the hands of a clock. The first time-indications were not numerical but concrete, as with all earliest counting. Yet, as we know, a number system, paralleling time, becomes a separate, invariable principle. The separations in social life––most fundamentally, division of labor––seem alone able to account for the growth of estranging conceptualization.

In fact, two critical mathematical inventions, zero and the place system, may serve as cultural evidence of division of labor. Zero and the place system, or position, emerged independently, "against considerable psychological resistance,"[43] in the Mayan and Hindu civilizations. Mayan division of labor, accompanied by enormous social stratification (not to mention a notorious obsession with time, and large-scale human sacrifice at the hands of a powerful priest class) is a vividly documented fact, while the division of labor reflected in the Indian caste system was "the most complex that the world had seen before the Industrial Revolution."[44]

The necessity of work (Marx) and the necessity of repression (Freud) amount to the same thing: civilization. These false commandments turned humanity away from nature and account for history as a "steadily lengthening chronicle of mass neurosis."[45] Freud credits scientific/mathematical achievement as the highest moment of civilization, and this seems valid as a function of its symbolic nature. "The neurotic process is the price we pay for our most precious human heritage, namely our ability to represent experience and communicate our thoughts by means of symbols."[46]

The triad of symbolization, work and repression finds its operating principle in division of labor. This is why so little progress was made

in accepting numerical values until the huge increase in division of labor of the Neolithic revolution: from the gathering of food to its actual production. With that massive changeover mathematics became fully grounded and necessary. Indeed it became more a category of existence than a mere instrumentality.

The fifth century B.C. historian Herodotus attributed the origin of mathematics to the Egyptian king Sesostris (1300 B.C.), who needed to measure land for tax purposes.[47] Systematized math––in this case geometry, which literally means "land measuring"––did in fact arise from the requirements of political economy, though it predates Sesostris' Egypt by perhaps 2000 years. The food surplus of Neolithic civilization made possible the emergence of specialized classes of priests and administrators which by about 3200 B.C. had produced the alphabet, mathematics, writing and the calendar.[48] In Sumer the first mathematical computations appeared, between 3500 and 3000 B.C., in the form of inventories, deeds of sale, contracts, and the attendant unit prices, units purchased, interest payments, etc.[49] As Bernal points out, "mathematics, or at least arithmetic, came even before writing."[50] The number symbols are most probably older than any other elements of the most ancient forms of writing.[51]

At this point domination of nature and humanity are signaled not only by math and writing, but also by the walled, grain-stocked city, along with warfare and human slavery. "Social labor" (division of labor), the coerced coordination of several workers at once, is thwarted by the old, personal measures; lengths, weights, volumes must be standardized. In this standardization, one of the hallmarks of civilization, mathematical exactitude and specialized skill go hand in hand. Math and specialization, requiring each other, developed apace and math became itself a specialty. The great trade routes, expressing the triumph of division of labor, diffused the new, sophisticated techniques of counting, measurement and calculation.

In Babylon, merchant-mathematicians contrived a comprehensive arithmetic between 3000 and 2500 B.C., which system "was fully articulated as an abstract computational science by about 2000 B.C."[52] In succeeding centuries the Babylonians even invented a symbolic algebra, though Babylonian-Egyptian math has been generally regarded as extremely trial-and-error or empiricist compared to that of the much later Greeks.

To the Egyptians and Babylonians mathematical figures had concrete referents: algebra was an aid to commercial transactions, a rectangle was a piece of land of a particular shape. The Greeks, however, were explicit in asserting that geometry deals with abstractions, and this development reflects an extreme form of division of labor and social

stratification. Unlike Egyptian or Babylonian society, in Greece, a large slave class performed all productive labor, technical as well as unskilled, such that the ruling class milieu that included mathematicians disdained practical pursuits or applications.

Pythagoras, more of less the founder of Greek mathematics (6th century B.C.) expressed this rarefied, abstract bent in no uncertain terms. To him numbers were immutable and eternal. Directly anticipating Platonic idealism, he declared that numbers were the intelligible key to the universe. Usually encapsulated as "everything is number," the Pythagorean philosophy held that numbers exist in a literal sense and are quite literally all that does exist.[53]

This form of mathematical philosophy, with the extremity of its search for harmony and order, may be seen as a deep fear of uncertainty or chaos, an oblique acknowledgment of the massive and perhaps unstable repression underlying Greek society. An artificial intellectual life that rested so completely on the surplus created by slaves was at pains to deny the senses, the emotions and the real world. Greek sculpture is another example, in its abstract, ideological conformations, devoid of feelings or their histories.[54] Its figures are standardized idealizations; the parallel with a highly exaggerated cult of mathematics is manifest.

The independent existence of ideas, which is Plato's fundamental premise, is directly derived from Pythagoras, just as his whole theory of ideas flows from the special character of mathematics. Geometry is properly an exercise of disembodied intellect, Plato taught, in character with his view that reality is a world of form from which matter, in every important respect, is banished. Philosophical idealism was thus established out of this world-denying impoverishment, based on the primacy of quantitative thinking. As C.I. Lewis observed, "from Plato to the present day, all the major epistemological theories have been dominated by, or formulated in the light of, accompanying conceptions of mathematics."[55]

It is no less accidental that Plato wrote "Let only geometers enter" over the door to his Academy, than that his totalitarian *Republic* insists that years of mathematical training are necessary to correctly approach the most important political and ethical questions.[56] Consistently, he denied that a stateless society ever existed, identifying such a concept with that of a "state of swine."[57]

Systematized by Euclid in the third century B.C., about a century after Plato, mathematics reached an apogee not to be matched for almost two millennia; the patron saint of intellect for the slave-based and feudal societies that followed was not Plato, but Aristotle, who criticized the former's Pythagorean reduction of science to mathematics.[58]

The long non-development of math, which lasted virtually until the

end of the Renaissance, remains something of a mystery. But growing trade began to revive the art of the quantitative by the twelfth and thirteenth centuries.[59] The impersonal order of the counting house in the new mercantile capitalism exemplified a renewed concentration on abstract measurement. Mumford stresses the mathematical prerequisite to later mechanization and standardization; in the rising merchant world, "counting numbers began here and in the end numbers alone counted."[60]

Division of labor is the familiar counterpart of trade. As Crombie noted, "from the early 12th century there was a tendency to increasing specialization."[61] Thus the connection between division of labor and math, discussed earlier in this essay, is also once more apparent: "the whole history of European science from the 12th to the 17th century can be regarded as a gradual penetration of mathematics."[62]

Decisive changes concerning time also announced a growing tendency toward re-establishment of the Greek primacy of mathematics. By the fourteenth century, public use of mechanical clocks introduced abstract time as the new medium of social life. Town clocks came to symbolize a "methodical expenditure of hours" to match the "methodical accountancy of money,"[63] as time became a succession of precious, mathematically isolated instants. In the steadily more sophisticated measurement of time, as in the intensely geometric Gothic style of architecture, could be seen the growing importance of quantification.

By the late fifteenth century an increasing interest in the ideas of Plato was underway[64] and in the Renaissance God acquired mathematical properties. The growth of maritime commerce and colonization after 1500 demanded unprecedented accuracy in navigation and artillery. Sarton compared the greedy victories of the Conquistadors to those of the mathematicians, whose "conquests were spiritual ones, conquests of pure reason, the scope of which was infinite."[65]

But the Renaissance conviction that mathematics should be applicable to all the arts (not to mention such earlier and atypical forerunners as Roger Bacon's 13th century contribution toward a strictly mathematical optics) was a mild prelude to the magnitude of number's triumph in the seventeenth century.

Though they were soon eclipsed by other advances of the 1600s, Johannes Kepler and Francis Bacon revealed its two most important and closely related aspects early in the century. Kepler, who completed the Copernican transition to the heliocentric model, saw the real world as composed of quantitative differences only; its differences are strictly those of number.[66] Bacon, in *The New Atlantis* (c. 1620), depicted an idealized scientific community, whose main object was domination of

nature; as Jaspers put it, "Mastery of nature...'knowledge is power,' has been the watchword since Bacon."[67]

The century of Galileo and Descartes––pre-eminent among those who deepened all the previous forms of quantitative alienation and thus sketched a technological future––began with a qualitative leap in the division of labor. Franz Borkenau provided the key as to why a profound change in the Western world-view took place in the seventeenth century, a movement to a fundamentally mathematical-mechanistic outlook. According to Borkenau, a great extension of division of labor, occurring from about 1600, introduced the novel notion of abstract work.[68] This reification of human activity proved pivotal.

Along with degradation of work, the clock is the basis of modern life, equally "scientific" in its reduction of life to a measurability, via objective, commodified units of time. The increasingly accurate and ubiquitous clock reached a real domination in the seventeenth century, as, correspondingly, "the champions of the new sciences manifested an avid interest in horological matters."[69]

Thus it seems fitting to introduce Galileo in terms of just this strong interest in the measurement of time; his invention of the first mechanical clock based on the principle of the pendulum was likewise a fitting capstone to his long career. As increasingly objectified or reified time reflects, at perhaps the deepest level, an increasingly alienated social world, Galileo's principal aim was the reduction of the world to an object of mathematical dissection.

Writing a few years before World War II and Auschwitz, Husserl located the roots of the contemporary crisis in this objectifying reduction and identified Galileo as its main progenitor. The life-world has been "devalued" by science precisely insofar as the "mathematization of nature" initiated by Galileo has proceeded[70]–– clearly no small indictment.

For Galileo as with Kepler, mathematics was the "root grammar of the new philosophical discourse that constituted modern scientific method."[71] He enunciated the principle, "to measure what is measurable and try to render what is not so yet."[72] Thus he resurrected the Pythagorean-Platonic substitution of a world of abstract mathematical relations for the real world, and its methods of absolute renunciation of the senses' claim to know reality. Observing this turning away from quality to quantity, this plunge into a shadow-world of abstractions, Husserl concluded that modern, mathematical science prevents us from knowing life as it is. And the rise of science has fueled ever more specialized knowledge, that stunting and imprisoning progression so well known by now.

Collingwood called Galileo "the true father of modern science" for the

success of his dictum that the book of nature "is written in mathematical language" and its corollary that therefore "mathematics is the language of science."[73] Due to this separation from nature, Gillispie evaluated, "After Galileo, science could no longer be humane."[74]

It seems very fitting that the mathematician who synthesized geometry and algebra to form analytic geometry (1637) and who, with Pascal, is credited with inventing calculus,[75] should have shaped Galiliean mathematicism into a new system of thinking. The thesis that the world is organized in such a way that there is a total break between people and the natural world, contrived as a total and triumphant world-view, is the basis for Descartes' renown as the founder of modern philosophy. The foundation of his new system, the famous "*cogito, ergo sum*," is the assigning of scientific certainty to the separation between mind and the rest of reality.[76]

This dualism provided an alienated means for seeing only a completely objectified nature. In the *Discourse on Method*..., Descartes declared that the aim of science is "to make us masters and possessors of nature."[77] Though he was a devout Christian, Descartes renewed the distancing from life that an already fading God could no longer effectively legitimize. As Christianity weakened, a new central ideology of estrangement came forth, this one guaranteeing order and domination based on mathematical precision.

To Descartes the material universe was a machine and nothing more, just as animals "indeede are nothing else but engines, or matter sett into a continual and orderly motion."[78] He saw the cosmos itself as a giant clockwork just when the illusion that time is a separate, autonomous process was taking hold. Also as living, animate nature died, dead, inanimate money became endowed with life, as capital and the market assumed the attributes of organic process and cycles.[79] Lastly, Descartes' mathematical vision eliminated any messy, chaotic or alive elements and ushered in an attendant mechanical world-view that was coincidental with a tendency toward central government controls and concentration of power in the form of the modern nation-state. "The rationalization of administration and of the natural order was occurring simultaneously," in the words of Merchant.[80] The total order of math and its mechanical philosophy of reality proved irresistible; by the time of Descartes' death in 1650 it had become virtually the official framework of thought throughout Europe.

Leibniz, a near-contemporary, refined and extended the work of Descartes; the "pre-established harmony" he saw in existence is likewise Pythagorean in lineage. This mathematical harmony, which Leibniz illustrated by reference to two independent clocks, recalls his dictum, "There is nothing that evades number."[81] Responsible also for the

more well-known phrase, "Time is money,"[82] Leibniz, like Galileo and Descartes, was deeply interested in the design of clocks.

In the binary arithmetic he devised, an image of creation was evoked; he imagined that one represented God and zero the void, that unity and zero expressed all numbers and all creation.[83] He sought to mechanize thought by means of a formal calculus, a project which he too sanguinely expected would be completed in five years. This undertaking was to provide all the answers, including those to questions of morality and metaphysics. Despite this ill-fated effort, Leibniz was perhaps the first to base a theory of math on the fact that it is a universal symbolic language; he was certainly the "first great modern thinker to have a clear insight into the true character of mathematical symbolism."[84]

Furthering the quantitative model of reality was the English royalist Hobbes, who reduced the human soul, will, brain, and appetites to matter in mechanical motion, thus contributing directly to the current conception of thinking as the "output" of the brain as computer.

The complete objectification of time, so much with us today, was achieved by Isaac Newton, who mapped the workings of the Galilean-Cartesian clockwork universe. Product of the severely repressed Puritan outlook, which focused on sublimating sexual energy into brutalizing labor, Newton spoke of absolute time, "flowing equably without regard to anything external."[85] Born in 1642, the year of Galileo's death, Newton capped the Scientific Revolution of the seventeenth century by developing a complete mathematical formulation of nature as a perfect machine, a perfect clock.

Whitehead judged that "the history of seventeenth-century science reads as though it were some vivid dream of Plato or Pythagoras,"[86] noting the astonishingly refined mode of its quantitative thought. Again the correspondence with a jump in division of labor is worth pointing out; as Hill described mid-seventeenth century England, "...significant specialization began to set in. The last polymaths were dying out...."[87] The songs and dances of the peasants slowly died, and in a rather literal mathematization, the common lands were enclosed and divided.

Knowledge of nature was part of philosophy until this time; the two parted company as the concept of mastery of nature achieved its definitive modern form. Number, which first issued from dissociation from the natural world, ended up describing and dominating it.

Fontenelle's *Preface on the Utility of Mathematics and Physics* (1702) celebrated the centrality of quantification to the entire range of human sensibilities, thereby aiding the eighteenth century consolidation of the breakthroughs of the preceding era. And whereas Descartes had asserted that animals could not feel pain because they are soulless, and that man is not exactly a machine because he has a soul, LeMettrie, in

1747, went the whole way and made man completely mechanical in his *L'Homme Machine*.

Bach's immense accomplishments in the first half of the eighteenth century also throw light on the spirit of math unleashed a century earlier and helped shape culture to that spirit. In reference to the rather abstract music of Bach, it has been said that he "spoke in mathematics to God."[88] At this time the individual voice lost its independence and tone was no longer understood as sung but as a mechanical conception. Bach, treating music as a sort of math, moved it out of the stage of vocal polyphony to that of instrumental harmony, based always upon a single, autonomous tone fixed by instruments, instead of somewhat variable with human voices.[89]

Later in the century Kant stated that in any particular theory there is only as much real science as there is mathematics, and devoted a considerable part of his *Critique of Pure Reason* to an analysis of the ultimate principles of geometry and arithmetic.[90]

Descartes and Leibniz strove to establish a mathematical science method as the paradigmatic way of knowing, and saw the possibility of a singular universal language, on the model of numerical symbols, that could contain the whole of philosophy. The eighteenth century Enlightenment thinkers actually worked at realizing this latter project. Condillac, Rousseau and others were also characteristically concerned with origins––such as the origin of language; their goal of grasping human understanding by taking language to its ultimate, mathematized symbolic level made them incapable of seeing that the origin of all symbolizing is alienation.

Symmetrical plowing is almost as old as agriculture itself, a means of imposing order on an otherwise irregular world. But as the landscape of cultivation became distinguished by linear forms of an increasingly mathematical regularity––including the popularity of formal gardens–– another eighteenth-century mark of math's ascendancy can be gauged.

With the early 1800s, however, the Romantic poets and artists, among others, protested the new vision of nature as a machine. Blake, Goethe and John Constable, for example, accused science of turning the world into a clockwork, with the Industrial Revolution providing ample evidence of its power to violate organic life.

The debasing of work among textile workers, which caused the furious uprisings of the English Luddites during the second decade of the nineteenth century, was epitomized by such automated and cheapened products as those of the Jacquard loom. This French device not only represented the mechanization of life and work unleashed by seventeenth century shifts, but directly inspired the first attempts at the modern computer. The designs of Charles Babbage, unlike the

"logic machines" of Leibniz and Descartes, involved both memory and calculating units under the control of programs via punched cards. The aims of the mathematical Babbage and the inventor-industrialist J.M. Jacquard can be said to rest on the same rationalist reduction of human activity to the machine as was then beginning to boom with industrialism. Quite in character, then, were the emphasis in Babbage's mathematical work on the need for improved notation to further the processes of symbolization; his *Principles of Economy*, which contributed to the foundations of modern management; and his contemporary fame as a crusader against London "nuisances," such as street musicians![91]

Paralleling the full onslaught of industrial capitalism and the hugely accelerated division of labor that it brought was a marked advance in mathematical development. According to Whitehead, "During the nineteenth century pure mathematics made almost as much progress as during the preceding centuries from Pythagoras onwards."[92]

The non-Euclidean geometries of Bolyai, Lobachevski, Riemann and Klein must be mentioned, as well as the modern algebra of Boole, generally regarded as the basis of symbolic logic. Boolean algebra made possible a new level of formulated thought, as its founder pondered "the human mind...an instrument of conquest and dominion over the powers of surrounding Nature,"[93] in an unthinking mirroring of the mastery mathematized capitalism was gaining in the mid-1800s. (Although the specialist is rarely faulted by the dominant culture for his "pure" creativity, Adorno adroitly observed that "the mathematician's resolute unconsciousness testifies to the connection between division of labor and 'purity.'")[94]

If math is impoverished language, it can also be seen as the mature form of that sterile coercion known as formal logic. Bertrand Russell, in fact, determined that mathematics and logic had become one.[95] Discarding unreliable, everyday language, Russell, Frege and others believed that in the further degradation and reduction of language lay the real hope for "progress in philosophy."[96]

The goal of establishing logic on mathematical grounds was related to an even more ambitious effort by the end of the nineteenth century, that of establishing the foundations of math itself. As capitalism proceeded to redefine reality in its own image and become desirous of securing its foundations, the "logic" stage of math in late 19th and early 20th centuries, fresh from new triumphs, sought the same. David Hilbert's theory of formalism, one such attempt to banish contradiction or error, explicitly aimed at safeguarding "the state power of mathematics for all time from all 'rebellions.'"[97]

Meanwhile, number seemed to be doing quite well without the philosophical underpinnings. Lord Kelvin's late nineteenth century

pronouncement that we don't really know anything unless we can measure it[98] bespoke an exalted confidence, just as Frederick Taylor's Scientific Management was about to lead the quantification edge of industrial management further in the direction of subjugating the individual to the lifeless Newtonian categories of time and space.

Speaking of the latter, Capra has claimed that the theories of relativity and quantum physics, developed between 1905 and the late 1920s, "shattered all the principal concepts of the Cartesian world view and Newtonian mechanics."[99] But relativity theory is certainly mathematical formalism, and Einstein sought a unified field theory by geometrizing physics, such that success would have enabled him to have said, like Descartes, that his entire physics was nothing other than geometry. That measuring time and space (or "space-time") is a relative matter hardly removes measurement as its core element. At the heart of quantum theory, similarly, is Heisenberg's Uncertainty Principle, which does not throw out quantification but rather expresses the limitations of classical physics in sophisticated mathematical ways. As Gillispie succinctly had it, Cartesian-Newtonian physical theory "was an application of Euclidean geometry to space, general relativity a spatialization of Riemann's curvilinear geometry, and quantum mechanics a naturalization of statistical probability."[100] More succinctly still: "Nature, before and after the quantum theory, is that which is to be comprehended mathematically."[101]

During these first three decades of the 20th century, moreover, the great attempts by Russell and Whitehead, Hilbert, et al., to provide a completely unproblematic basis for the whole edifice of math, referred to above, went forward with considerable optimism. But in 1931 Kurt Gödel dashed these bright hopes with his Incompleteness Theorem, which demonstrated that any symbolic system can be either complete or fully consistent, but not both. Gödel's devastating mathematical proof of this not only showed the limits of axiomatic number systems, but rules out enclosing nature by any closed, consistent language. If there are theorems or assertions within a system of thought which can neither be proved nor disproved internally, it if is impossible to give a proof of consistency within the language used. As Gödel and immediate successors like Tarski and Church convincingly argued, "any system of knowledge about the world is, and must remain, fundamentally incomplete, eternally subject to revision."[102]

Morris Kline's *Mathematics: The Loss of Certainty* related the "calamities" that have befallen the once seemingly inviolable "majesty of mathematics,"[103] chiefly dating from Gödel. Math, like language, used to describe the world and itself, fails in its totalizing quest, in the same way that capitalism cannot provide itself with unassailable grounding.

Further, with Gödel's Theorem not only was mathematics "recognized to be much more abstract and formal than had been traditionally supposed,"[104] but it also became clear that "the resources of the human mind have not been, and cannot be, fully formalized."[105]

But who could deny that, in practice, quantity has been mastering us, with or without definitively shoring up its theoretical basis? Human helplessness seems to be directly proportional to mathematical technology's domination over nature, or as Adorno phrased it, "the subjection of outer nature is successful only in the measure of the repression of inner nature."[106] And certainly understanding is diminished by number's hallmark, division of labor. Raymond Firth accidentally exemplified the stupidity of advanced specialization, in a passing comment on a crucial topic: "the proposition that symbols are instruments of knowledge raises epistemological issues which anthropologists are not rained to handle."[107] The connection with a more common degradation is made by Singh, in the context of an ever more refined division of labor and a more and more technicized social life, nothing that "automation of computation immediately paved the way for automatizing industrial operations."[108]

The heightened tedium of computerized office work is today's very visible manifestation of mathematized, mechanized labor, with its neo-Taylorist quantification via electronic display screens, announcing the "information explosion" or "information society." Information work is now the chief economic activity and information the distinctive commodity,[109] in large part echoing the main concept of Shannon's information theory of the late 1940s, in which "the production and the transmission of information could be defined quantitatively."[110]

From knowledge, to information, to data, the mathematizing trajectory moves away from meaning––paralleled exactly in the realm of "ideas" (those bereft of goals or content, that is) by the ascendancy of structuralism. The "global communications revolution" is another telling phenomenon, by which a meaningless "input" is to be instantly available everywhere among people who live, as never before, in isolation.[111]

Into this spiritual vacuum the computer boldly steps. In 1950 Turing said, in answer to the question "can machines think?", "I believe that at the end of the century the use of words and general educated opinion will have altered so much that one will be able to speak of machines thinking without expecting to be contradicted."[112] Note that his reply had nothing to do with the state of machines but wholly that of humans. As pressures build for life to become more quantified and machine-like, so does the drive to make machines more life-like.

By the mid-'60s, in fact, a few prominent voices already announced that the distinction between human and machine was about to be

superseded--and saw this as positive. Mazlish provided an especially unequivocal commentary: "Man is on the threshold of breaking past the discontinuity between himself and machines.... We cannot think any longer of man without a machine....Moreover, this change...is essential to our harmonious acceptance of an industrialized world."[113]

By the late 1980s thinking sufficiently impersonated the machine that Artificial Intelligence experts, like Minsky, could matter-of-factly speak of the symbol-manipulating brain as "a computer made of meat."[114] Cognitive psychology, echoing Hobbes, has become almost entirely based on the computational model of thought in the decades since Turing's 1950 prediction.[115]

Heidegger felt that there is an inherent tendency for Western thinking to merge into the mathematical sciences, and saw science as "incapable of awakening, and in fact emasculating, the spirit of genuine inquiry."[116] We find ourselves, in an age when the fruits of science threaten to end human life altogether, when a dying capitalism seems capable of taking everything with it, more apt to want to discover the ultimate origins of the nightmare.

When the world and its thought (Lévi-Strauss and Chomsky come immediately to mind) reach a condition that is increasingly mathematized and empty (where computers are widely touted as capable of feelings and even of life itself),[117] the beginnings of this bleak journey, including the origins of the number concept, demand comprehension. It may be that this inquiry is essential to save us and our humanness.

ENDNOTES

1. "...the idea of number implies the simple intuition of a multiplicity of parts or units, which are absolutely alike." Henri Bergson, *Time and Free Will* (London, 1910), p. 76.
2. H. Dingle, "Physics and God," *Hibbert Journal*, vol. xxvi, no. 1 (1928), p. 44.
3. Max Horkheimer and Theodor W. Adorno, *The Dialectic of Enlightenment* (New York, 1972), p. 21.
4. Robert C. Neville, *Freedom and Cosmology* (New Haven, 1974), p. 83.
5. J.D. Bernal, *The Extension of Man* (London, 1972), p. 27.
6. Hermann Weyl, *The Philosophy of Mathematics and Natural Science* (Princeton, 1949), p. 144.
7. "...the number-language of a mathematic and the grammar of a tongue are structurally alike." Oswald Spengler, *The Decline of the West*, vol.1 (New York, 1929), p. 4.
8. Max Black, *The Nature of Mathematics* (London, 1933), p. 4.
9. H. Levy, *The Universe of Science* (New York, 1933), p. 82.
10. Charles Parsons, *Mathematics in Philosophy* (Ithaca, 1980), p. 176.

11. Alfred North Whitehead, *Eine Enfürung in die Mathematik* (Berne, 1928), pp. 41-47. (Generality and the will to generality are not discussed in the English edition.)
12. "All human knowledge is either experience or mathematics." Friedrich Nietzsche, *The Will to Power* (New York, 1967), #530 (p. 288).
13. Arend Heyting, quoted in Claude Lévi-Strauss, *The Savage Mind* (Chicago, 1966), p. 248.
14. Karl Vossler, *The Spirit of Language in Civilization* (London, 1932), p. 212.
15. Theodor W. Adorno, *Negative Dialectics* (New York, 1973), p. 148.
16. *Ibid*., p. 5.
17. Michel Foucault, *The Archaeology of Knowledge* (New York, 1972), pp. 188-189.
18. Quoted in Morris Kline, *Mathematics: The Loss of Certainty* (New York, 1938), p.99.
19. Franz Boas, *The Mind of Primitive Man* (New York, 1938), pp. 218-219.
20. Tobias Dantzig, *Number: The Language of Science* (New York, 1959), p. 5.
21. C.R. Hallpike, *The Foundations of Primitive Thought* (Oxford, 1979), p. 267.
22. Raoul Allier, *The Mind of the Savage* (New York, 1929), p. 239.
23. Cited in Jeremy Campbell, *Grammatical Man: Information, Entropy, Language, and Life* (New York, 1982), p. 153.
24. Leslie A. White, "The Agricultural Revolution," *A Reader in Cultural Change*, vol. 1, ed. Ivan A. Brady and Barry L. Isaac (Cambridge, MA, 1975), pp. 101-102.
25. Dorothy Lee, "Being and Value in a Primitive Culture," *The Journal of Philosophy*, vol. xlvi, no. 13 (1949), p. 403.
26. Max Wertheimer, "Numbers and Number Concepts in Primitive Peoples," *A Source Book of Gestalt Psychology*, ed. Willis D. Ellis (London, 1938), pp. 265-267.
27. Bryan Morgan, *Men and Discoveries in Mathematics* (London, 1972), p. 12.
28. Alex Comfort, *I and That* (New York, 1979), p. 66.
29. Eric Partridge, *Origins: A Short Etymological Dictionary of Modern English* (New York, 1983), pp. 435-436.
30. Dorothy Lee, "Lineal and Nonlineal Codifications of Reality," *Psychosomatic Medicine*, vol. 12, no. 2 (1950), p. 96.
31. Marshall Sahlins, from "Discussions, Part II," in *Man the Hunter*, ed. Richard B. Lee and Irven DeVore (Chicago, 1968), p. 89. Sahlins, *Stone Age Economics* (Chicago, 1972), p. 10.
32. Glynn L. Isaac, "Chronology and The Temple of Cultural Change during the Pleistocene," in *The Calibration of Human Evolution*, ed. W.W. Bishop and J.A. Miller (Edinburgh, 1972).
33. Sahlins, *Stone Age Economics*, pp. 278-279.
34. Albert Spaulding Cook, *Myth and Language* (Bloomington, 1980), p. 9.
35. C.S. Belshaw, "Theoretical Problems in Economic Anthropology," in *Social Organization*, ed. Maurice Freedman (Chicago, 1967), p. 35.
36. Pierre Clastres, *Society Against the State* (New York, 1977), p. 7.
37. Sahlins, *Stone Age Economics*, p. 82.
38. John E. Pfeiffer, *The Creative Explosion* (New York, 1982), p. 64.
39. Lewis Mumford, *The Myth of the Machine* (New York, 1967), pp. 139-140.
40. Jacques Derrida, *Edmund Husserl's Origin of Geometry: An Introduction* (Stony Brook, NY, 1978),
p. 128.
41. Hannah Arendt, *The Human Condition* (Chicago, 1958), p. 265.
42. Weyl, *Op.cit*., p. 66
43. A.L. Kroeber, *Anthropology* (New York, 1948), p. 471.

44. Carleton S. Coon, *The Story of Man* (New York, 1954), p. 322.
45. Frederick Turner, *Beyond Geography: The Western Spirit Against the Wilderness* (New York, 1980), p. 66.
46. Lawrence Kubie, *Practical and Theoretical Aspects of Psychoanalysis* (New York, 1950), p. 19.
47. Morris R. Cohen and I.E. Drabkin, *A Sourcebook in Greek Science* (Cambridge, MA, 1966), p. 34, n. 13.
48. Joseph Campbell, *Oriental Mythology* (*The Masks of God*, vol. 2) (New York, 1962), pp. 41-42.
49. Richard Olson, *Science Deified, Science Defied* (Berkeley, 1982), p. 30.
50. J.D. Bernal, *Science in History*, vol. 1 (Cambridge, MA, 1971), p. 120.
51. Frederick Bodmer, *The Loom of Language* (New York, 1944), p. 44.
52. Charles J. Brainerd, *The Origin of the Number Concept* (New York, 1979), p. 6.
53. *Ibid*., p. 9.
54. William M. Ivens, Jr., *Art and Geometry* (Cambridge, 1946), p. 30.
55. C.I. Lewis, *Mind and World Order* (New York, 1956), p. vii.
56. Olson, *Op.cit*., p. 112.
57. Plato predicated the beginning of the state on the "natural" inequality reflected in division of labor. Productive endeavor is from the beginning organized through specialization and division of work, and the state is not only derived from it but acquires stability via this fragmentation and coordination. *The Republic*, translated by G.M.A. Grube (London, 1981), sections 369, 370.
58. It can be cogently argued that Plato and Aristotle share essentially the same reductive method. For example, see Burt Alpert, *Inversions* (San Francisco, 1973), chapters 5 and 6.
59. David S. Landes, *Revolution in Time* (Cambridge, MA, 1983), p. 78.
60. Mumford, *Op. cit*., p. 278.
61. A.C. Crombie, *Medieval and Early Modern Science*, vol. 1 (Cambridge, MA, 1967), p. 178.
62. *Ibid*., pp. 74-75.
63. Lewis Mumford, *The Condition of Men* (New York, 1944), p. 176.
64. Arnold Pacey, *The Maze of Ingenuity* (Cambridge, MA, 1976), p. 96.
65. George Sarton, *Sarton on the History of Science* (Cambridge, MA, 1976), p. 96.
66. Edwin Arthur Burtt, *The Metaphysical Foundations of Modern Physical Science* (London, 1925), p. 56.
67. Karl Jaspers, *The Origin and Goal of History* (New Haven, 1953), p. 89.
68. Franz Borkenau, *Die Ubergang vom feudalen zum burgerlichen Weltbild* (Paris, 1934). The division of labor thesis is central to Borkenau's attempt to establish the origin of the mentality of the manufacturing peirod. Descartes' view of animals as merely cleverly contrived mechanisms––machines
––is a product, for example, of the heightened objectification involved in the increase in fragmented work.
69. Carlo M. Cipolla, *Clocks and Culture*, 1300-1700 (New York, 1967), p. 57.
70. Edmund Husserl, *The Crisis of European Sciences and Transcendental Phenomenology* (Evanston, 1970), pp. 21-59.
71. Gerald J. Galagan, *The Logic of Modernity* (New York, 1982), p. 31.
72. Weyl, *Op. cit*., p. 139.
73. R.G. Collingwood, *An Essay on Metaphysics* (London, 1940), p. 256.
74. Charles Coulton Gillispie, *The Edge of Objectivity* (Princeton, 1960), p. 81.
75. In the spatialized age of trade and navigation that was the seventeenth century,

it is not accidental that these advances in math provide solution to problems of motion. Similarly, and more concretely, probability and statistics originate at this time to deal with the complexities of insuring ships.

76. There is much validity to the claim that the main thrust of modern intellectual life is to have "followed Plato and Descartes over the abyss into the insane delusion that the true essence of man lies in disembodied mental activity." Norman O. Brown, *Life Against Death* (New York, 1959), p. 34.

77. Quoted from Alexander Rustow, *Freedom and Domination* (Princeton, 1980), p. 288.

78. Quoted in Pacey, *Op.cit*., p. 134.

79. Carolyn Merchant, *The Death of Nature* (San Francisco, 1980), p. 288.

80. Ibid., p. 205.

81. Ernst Cassirer, *The Philosophy of Symbolic Forms* (New Haven, 1957), p. 341.

82. G.H. Baillie, *Clocks and Watches: An Historical Bibliography* (London, 1951), p. 103.

83. Richard Courrant and Herbert Robbins, *What is Mathematics?* (London, 1941), p. 9.

84. Ernst Cassirer, *An Essay on Man* (New Haven, 1944), p. 217.

85. Burtt, *Op. cit*., p. 261.

86. Alfred North Whitehead, *Science and the Modern World* (New York, 1948), p. 37.

87. Christopher Hill, *Intellectual Origins of the English Revolution* (Oxford, 1965), p. 245.

88. Lawrence LeShan and Henry Morgenau, *Einstein's Space and Van Gogh's Sky* (New York, 1982), p. 169.

89. Paul Bekker, *The Story of Music: An Historical Sketch of the Changes in Musical Form* (New York, 1927), pp. 77-114.

90. John Katz, *The Will to Civilization* (New York, 1957), p. 85.

91. J.M. Dubbey, *The Mathematical Work of Charles Babbage* (Cambridge, 1978). Douglas Hofstadter, *Gödel,* Escher, Bach: *An Eternal Golden Braid* (New York, 1979), p. 25.

92. A.N. Whitehead, *Space and the Modern World* (New York, 1931), p. 49.

93. George Boole, *Studies* (London, 1952), pp. 187-188.

94. Theodor W. Adorno, *Against Epistemology: A Metacritique* (Cambridge, MA, 1983), p. 55.

95. Bertrand Russell, *Introduction to Mathematical Philosophy* (London, 1919), p. 194.

96. Paul A. Schilpp, ed., *The Philosophy of Bertrand Russell* (New York, 1951). See especially Russell's "Reply to Criticisms," p. 694.

97. Cassirer, *The Philosophy of Symbolic Forms*, p. 387, quoting Hilbert from the German. The principal effort was Russell and Whitehead's *Principia Mathematica* (London, 1910-1913). Another try is found in Brouwer's intuitionist approach, which claims that numerical thinking stands at the beginning of all thought and that it should be thought of as "an essentially languageless activity of the mind having its origin in the perception of a move of time." D.Van Dalen, ed., *Brouwer's Cambridge Lectures on Intuitionism* (Cambridge, 1981), p. 4.

98. Yi-Fu Tuan, *Space and Place* (Minneapolis, 1977), p. 200.

99. Fritjof Capra, *The Turning Point* (New York, 1981), p. 74.

100. Gillispie, *Op. cit*., p. 87.

101. Horkheimer and Adorno, *Op. cit*., p. 24.

102. Rudy Rucker, *Infinity and the Mind* (Boston, 1982), p. 161.

103. Morris Kline, *Op. cit.*, p. 3.
104. Ernest Nagel and James R. Newman, *Gödel's Proof* (New York, 1958), p. 11.
105. *Ibid*., p. 101.
106. Jurgen Habermas, *Philosophical-Political Profiles* (Minneapolis, 1983), p. 100.
107. Raymond Firth, *Symbols: Public and Private* (Ithaca, 1973), p. 82.
108. Jagjit Singh, *Great Ideas in Information Theory and Cybernetics* (New York, 1966), p. 7.
109. Concerning the inevitability of the "information environment," we are told, even threatened, on all sides. For example: "The sooner this fact and its consequences become part of our consensual reality, the better for everyone...."
110. Amiel Feinstein, *Foundations of Information Theory* (New York, 1958), p. 1.
111. The sharp rise in the number of single-person households since the 1960s, the fact (early 1984) that Americans' daily consumption of television is more than seven hours, etc.
112. Alan Turing, "Computing Machinery and Intelligence," *Mind*, vol. lix, no. 256 (1950).
113. Bruce Mazlish, "The Fourth Discontinuity," *Technology and Culture*, vol. 8, no. 8 (January 1967), pp. 14-15.
114. Martin Gardner, *Logic Machines and Diagrams* (Chicago, 1982), p. 148.
115. John Haugeland, "Semantic Engines: An Introduction to Mind Design," *Mind Design: Philosophy, Psychology, Artificial Intelligence*, ed. John Haugeland (Montpelier?, VT, 1981), p. 1.
116. Martin Heidegger, *Introduction to Metaphysics* (New Haven, 1959), p. 49.
117. For example, Hofstadter, *Op. cit*., pp. 677, 696; Igor Aleksander and Piers Burnett, *Reinventing Man: The Robot Becomes Reality* (New York, 1983); Robert E. Mueller and Erik T. Mueller, "Would an Intelligent Computer Have A 'Right to Life'?;" in Pamela McCorduck, *Machines Who Think* (New York, 1979); *Creative Computing* (August 1983); Geoff Simons, *Are Computers Alive? Evolution and New Life Forms* (Boston, 1984)––a very tiny sampling. A more popular example is the "Affectionate Machine," special issue of *Psychology Today*, December 1983.

THE CASE AGAINST ART

Art is always about "something hidden." But does it help us connect with that hidden something? I think it moves us away from it.

During the first million or so years as reflective beings humans seem to have created no art. As Jameson put it, art had no place in that "unfallen social reality" because there was no need for it. Though tools were fashioned with an astonishing economy of effort and perfection of form, the old cliché about the aesthetic impulse as one of the irreducible components of the human mind is invalid.

The oldest enduring works of art are hand-prints, produced by pressure or blown pigment––a dramatic token of direct impress on nature. Later in the Upper Paleolithic era, about 30,000 years ago, commenced the rather sudden appearance of the cave art associated with names like Altamira and Lascaux. These images of animals possess an often breathtaking vibrancy and naturalism, though concurrent sculpture, such as the widely-found "venus" statuettes of women, was quite stylized. Perhaps this indicates that domestication of people was to precede domestication of nature. Significantly, the "sympathetic magic" or hunting theory of earliest art is now waning in the light of evidence that nature was bountiful rather than threatening.

The veritable explosion of art at this time bespeaks an anxiety not felt before: in Worringer's words, "creation in order to subdue the torment of perception." Here is the appearance of the symbolic, as a moment of discontent. It was a social anxiety; people felt something precious slipping away. The rapid development of the earliest ritual or ceremony parallels the birth of art, and we are reminded of the earliest ritual re-enactments of the moment of "the beginning," the primordial paradise of the timeless present. Pictorial representation roused the belief in controlling loss, the belief in coercion itself.

And we see the earliest evidence of symbolic division, as with the half-human, half-beast stone faces at El Juyo. The world is divided into opposing forces, by which binary distinction the contrast of culture and nature begins and a productionist, hierarchical society is perhaps already prefigured.

The perceptual order itself, as a unity, starts to break down in reflection of an increasingly complex social order. A hierarchy of senses,

with the visual steadily more separate from the others and seeking its completion in artificial images such as cave paintings, moves to replace the full simultaneity of sensual gratification. Lévi-Strauss discovered, to his amazement, a tribal people that had been able to see Venus in daytime; but not only were our faculties once so very acute, they were also not ordered and separate. Part of training sight to appreciate the objects of culture was the accompanying repression of immediacy in an intellectual sense: reality was removed in favor of merely aesthetic experience. Art anesthetizes the sense organs and removes the natural world from their purview. This reproduces culture, which can never compensate for the disability.

Not surprisingly, the first signs of a departure from those egalitarian principles that characterized hunter-gatherer life show up now. The shamanistic origin of visual art and music has been often remarked, the point here being that the artist-shaman was the first specialist. It seems likely that the ideas of surplus and commodity appeared with the shaman, whose orchestration of symbolic activity portended further alienation and stratification.

Art, like language, is a system of symbolic exchange that introduces exchange itself. It is also a necessary device for holding together a community based on the first symptoms of unequal life. Tolstoy's statement that "art is a means of union among men, joining them together in the same feeling," elucidates art's contribution to social cohesion at the dawn of culture. Socializing ritual required art; art works originated in the service of ritual; the ritual production of art and the artistic production of ritual are the same. "Music," wrote Seu-ma-tsen, "is what unifies."

As the need for solidarity accelerated, so did the need for ceremony; art also played a role in its mnemonic function. Art, with myth closely following, served as the semblance of real memory. In the recesses of the caves, earliest indoctrination proceeded via the paintings and other symbols, intended to inscribe rules in depersonalized, collective memory. Nietzsche saw the training of memory, especially the memory of obligations, as the beginning of civilized morality. Once the symbolic process of art developed it dominated memory as well as perception, putting its stamp on all mental functions. Cultural memory meant that one person's action could be compared with that of another, including portrayed ancestors, and future behavior anticipated and controlled. Memories became externalized, akin to property but not even the property of the subject.

Art turns the subject into object, into symbol. The shaman's role was to objectify reality; this happened to outer nature and to subjectivity alike because alienated life demanded it. Art provided the medium of

conceptual transformation by which the individual was separated from nature and dominated, at the deepest level, socially. Art's ability to symbolize and direct human emotion accomplished both ends. What we were led to accept as necessity, in order to keep ourselves oriented in nature and society, was at base the invention of the symbolic world, the Fall of Man.

The world must be mediated by art (and human communication by language, and being by time) due to division of labor, as seen in the nature of ritual. The real object, its particularity, does not appear in ritual; instead, an abstract one is used, so that the terms of ceremonial expression are open to substitution. The conventions needed in division of labor, with its standardization and loss of the unique, are those of ritual, of symbolization. The process is at base identical, based on equivalence. Production of goods, as the hunter-gatherer mode is gradually liquidated in favor of agriculture (historical production) and religion (full symbolic production), is also ritual production.

The agent, again, is the shaman-artist, enroute to priesthood, leader by reason of mastering his own immediate desires via the symbol. All that is spontaneous, organic and instinctive is to be neutered by art and myth.

Recently the painter Eric Fischl presented at the Whitney Museum a couple in the act of sexual intercourse. A video camera recorded their actions and projected them on a TV monitor before the two. The man's eyes were riveted to the image on the screen, which was clearly more exciting than the act itself. The evocative cave pictures, volatile in the dramatic, lamp-lit depths, began the transfer exemplified in Fischl's tableau, in which even the most primal acts can become secondary to their representation. Conditioned self-distancing from real existence has been a goal of art from the beginning. Similarly, the category of audience, of supervised consumption, is nothing new, as art has striven to make life itself an object of contemplation.

As the Paleolithic Age gave way to the Neolithic arrival of agriculture and civilization (production, private property, written language, government and religion) culture could be seen more fully as spiritual decline via division of labor, though global specialization and a mechanistic technology did not prevail until the late Iron Age.

The vivid representation of late hunter-gatherer art was replaced by a formalistic, geometric style, reducing pictures of animals and humans to symbolic shapes. This narrow stylization reveals the artist shutting himself off from the wealth of empirical reality and creating the symbolic universe. The aridity of linear precision is one of the hallmarks of this turning point, calling to mind the Yoruba, who associate line with civilization: "This country has become civilized," literally means, in

Yoruba, "this earth has lines upon its face." The inflexible forms of truly alienated society are everywhere apparent; Gordon Childe, for example, referring to this spirit, points out that the pots of a Neolithic village are all alike. Relatedly, warfare in the form of combat scenes makes its first appearance in art.

The work of art was in no sense autonomous at this time; it served society in a direct sense, an instrument of the needs of the new collectivity. There had been no worship-cults during the Paleolithic, but now religion held sway, and it is worth remembering that for thousands of years art's function will be to depict the gods. Meanwhile, what Glück stressed about African tribal architecture was true in all other cultures as well: sacred buildings came to life on the model of those of the secular ruler. And though not even the first signed works show up before the late Greek period, it is not inappropriate to turn here to art's realization, some of its general features.

Art not only creates the symbols of and for a society, it is a basic part of the symbolic matrix of estranged social life. Oscar Wilde said that art does not imitate life, but vice versa; which is to day that life follows symbolism, not forgetting that it is (deformed) life that produces symbolism. Every art form, according to T.S. Eliot, is "an attack upon the inarticulate." Upon the unsymbolized, he should have said.

Both painter and poet have always wanted to reach the silence behind and within art and language, leaving the question of whether the individual, in adopting these modes of expression, didn't settle for far too little. Though Bergson tried to approach the goal of thought without symbols, such a breakthrough seems impossible outside our active undoing of all the layers of alienation. In the extremity of revolutionary situations, immediate communication has bloomed, if briefly.

The primary function of art is to objectify feeling, by which one's own motivations and identity are transformed into symbol and metaphor. All art, as symbolization, is rooted in the creation of substitutes, surrogates for something else; by its very nature therefore, it is falsification. Under the guise of "enriching the quality of human experience," we accept vicarious, symbolic descriptions of how we should feel, trained to need such public images of sentiment that ritual art and myth provide for our psychic security.

Life in civilization is lived almost wholly in a medium of symbols. Not only scientific or technological activity but aesthetic form are canons of symbolization, often expressed quite unspiritually. It is widely averred, for example, that a limited number of mathematical figures account for the efficacy of art. There is Cezanne's famous dictum to "treat nature by the cylinder, the sphere and the cone," and Kandinsky's judgment that "the impact of the acute angle of a triangle on a circle produces an effect

no less powerful than the finger of God touching the finger of Adam in Michelangelo." The sense of a symbol, as Charles Pierce concluded, is its translation into another symbol; this is an endless reproduction, with the real always displaced.

Though art is not fundamentally concerned with beauty, its inability to rival nature sensuously has evoked many unfavorable comparisons. "Moonlight is sculpture," wrote Hawthorne; Shelley praised the "unpremeditated art" of the skylark; Verlaine pronounced the sea more beautiful than all the cathedrals. And so on, with sunsets, snowflakes, flowers, etc., beyond the symbolic products of art. Jean Arp, in fact, termed :the most perfect picture" nothing more than "warty, threadbare approximation, a dry porridge."

Why then would one respond positively to art? As compensation and palliative, because our relationship to nature and life is so deficient and disallows an authentic one. As Montherlant put it, "One gives to one's art what one has not been capable of giving to one's own existence." It is true for artist and audience alike; art, like religion, arises from unsatisfied desire.

Art should be considered a religious activity and category also in the sense of Nietzsche's aphorism, "We have Art in order not to perish of Truth." Its consolation explains the widespread preference for metaphor over a direct relationship to the genuine article. If pleasure were somehow released from every restraint, the result would be the antithesis of art. In dominated life freedom does not exist outside art, however, and so even a tiny, deformed fraction of the riches of being is welcomed. "I create in order not to cry," revealed Klee.

This separate realm of contrived life is both important and in complicity with the actual nightmare that prevails. In its institutionalized separation it corresponds to religion and ideology in general, where its elements are not, and cannot be, actualized; the work of art is a selection of possibilities unrealized except in symbolic terms. Arising from the sense of loss referred to above, it conforms to religion not only by reason of its confinement to an ideal sphere and its absence of any dissenting consequences, but it can hence be no more than thoroughly neutralized critique at best.

Frequently compared to play, art and culture––like religion––have more often worked as generators of guilt and oppression. Perhaps the ludic function of art, as well as its common claim to transcendence, should be estimated as one might reassess the meaning of Versailles: by contemplating the misery of the workers who perished draining its marshes.

Clive Bell pointed to the intention of art to transport us from the plane of daily struggle "to a world of aesthetic exaltation," paralleling

the aim of religion. Malraux offered another tribute to the conservative office of art when he wrote that without art works civilization would crumble "within fifty years...," becoming "enslaved to instincts and to elementary dreams."

Hegel determined that art and religion also have "this in common, namely, having entirely universal matters as content." This feature of generality, of meaning without concrete reference, serves to introduce the notion that ambiguity is a distinctive sign of art.

Usually depicted positively, as a revelation of truth free of the contingencies of time and place, the impossibility of such a formulation only illuminates another moment of falseness about art. Kierkegaard found the defining trait of the aesthetic outlook to be its hospitable reconciliation of all points of view and its evasion of choice. This can be seen in the perpetual compromise that at once valorizes art, only to repudiate its intent and contents with "well, after all, it is only art."

Today culture is commodity and art perhaps the star commodity. The situation is understood inadequately as the product of a centralized culture industry, a la Horkheimer and Adorno. We witness, rather, a mass diffusion of culture dependent on participation for its strength, not forgetting that the critique must be of culture itself, not of its alleged control.

Daily life has become aestheticized by a saturation of images and music, largely through the electronic media, the representation of representation. Image and sound, in their ever-presence, have become a void, ever more absent of meaning for the individual. Meanwhile, the distance between artist and spectator has diminished, a narrowing that only highlights the absolute distance between aesthetic experience and what is real. This perfectly duplicates the spectacle at large: separate and manipulating, perpetual aesthetic experience and a demonstration of political power.

Reacting against the increasing mechanization of life, avant-garde movements have not, however, resisted the spectacular nature of art any more than orthodox tendencies have. In fact, one could argue that Aestheticism, or "art for art's sake," is more radical than an attempt to engage alienation with its own devices. The late 19th century art pour l'art development was a self-reflective rejection of the world, as opposed to the avant-garde effort to somehow organize life around art. A valid moment of doubt lies behind Aestheticism, the realization that division of labour has diminished experience and turned art into just another specialization: art shed its illusory ambitions and became its own content.

The avant-garde has generally staked out wider claims, projecting a leading role denied it by modern capitalism. It is best understood as a

social institution peculiar to technological society that so strongly prizes novelty; it is predicated on the progressivist notion that reality must be constantly updated.

But avant-garde culture cannot compete with the modern world's capacity to shock and transgress (and not just symbolically). Its demise is another datum that the myth of progress is itself bankrupt.

Dada was one of the last two major avant-garde movements, its negative image greatly enhanced by the sense of general historical collapse radiated by World War I. Its partisans claimed, at times, to be against all "isms," including the idea of art. But painting cannot negate painting, nor can sculpture invalidate sculpture, keeping in mind that all symbolic culture is the co-opting of perception, expression and communication. In fact, Dada was a quest for new artistic modes, its attack on the rigidities and irrelevancies of bourgeois art a factor in the advance of art; Hans Richter's memoirs referred to "the regeneration of visual art that Dada had begun." If World War I almost killed art, the Dadaists reformed it.

Surrealism is the last school to assert the political mission of art. Before trailing off into Trotskyism and/or art-world fame, the Surrealists upheld chance and the primitive as ways to unlock "the Marvelous" which society imprisons in the unconscious. The false judgment that would have re-introduced art into everyday life and thereby transfigured it certainly misunderstood the relationship of art to repressive society. The real barrier is not between art and social reality, which are one, but between desire and the existing world. The Surrealists' aim of inventing a new symbolism and mythology upheld these categories and mistrusted unmediated sensuality. Concerning the latter, Breton held that "enjoyment is a science; the exercise of the senses demands a personal initiation and therefore you need art."

Modernist abstraction resumed the trend begun by Aestheticism, in that it expressed the conviction that only by a drastic restriction of its field of vision could art survive. With the least strain of embellishment possible in a formal language, art became increasingly self-referential, in its search for a "purity" that was hostile to narrative. Guaranteed not to represent anything, modern painting is consciously nothing more than a flat surface with paint on it.

But the strategy of trying to empty art of symbolic value, the insistence on the work of art as an object in its own right in a world of objects, proved a virtually self-annihilating method. This "radical physicality," based on aversion to authority though it was, never amounted to more, in its objectiveness, than simple commodity status. The sterile grids of Mondrian and the repeated all-black squares of Reinhardt echo this acquiescence no less than hideous 20th century

architecture in general. Modernist self-liquidation was parodied by Rauschenberg's 1953 *Erased Drawing,* exhibited after his month-long erasure of a de Kooning drawing. The very concept of art, Duchamp's showing of a urinal in a 1917 exhibition notwithstanding, became an open question in the '50s and has grown steadily more undefinable since.

Pop Art demonstrated that the boundaries between art and mass media (e.g. ads and comics) are dissolving. Its perfunctory and mass-produced look is that of the whole society and the detached, blank quality of a Warhol and his products sum it up. Banal, morally weightless, depersonalized images, cynically manipulated by a fashion-conscious marketing stratagem: the nothingness of modern art and its world revealed.

The proliferation of art styles and approaches in the '60s––Conceptual, Minimalist, Performance, etc.––and the accelerated obsolescence of most art brought the "postmodern" era, a displacement of the formal "purism" of modernism by an eclectic mix from past stylistic achievements. This is basically a tired, spiritless recycling of used-up fragments, announcing that the development of art is at an end. Against the global devaluing of the symbolic, moreover, it is incapable of generating new symbols and scarcely even makes an effort to do so.

Occasionally critics, like Thomas Lawson, bemoan art's current inability "to stimulate the growth of a really troubling doubt," little noticing that a quite noticeable movement of doubt threatens to throw over art itself. Such "critics" cannot grasp that art must remain alienation and as such must be superseded, that art is disappearing because the immemorial separation between nature and art is a death sentence for the world that must be voided.

Deconstruction, for its part, announced the project of decoding Literature and indeed the "texts," or systems of signification, throughout all culture. But this attempt to reveal supposedly hidden ideology is stymied by its refusal to consider origins or historical causation, an aversion it inherited from structuralism/poststructuralism. Derrida, Deconstruction's seminal figure, deals with language as a solipsism, consigned to self-interpretation; he engages not in critical activity but in writing about writing. Rather than a de-constructing of impacted reality, this approach is merely a self-contained academicism, in which Literature, like modern painting before it, never departs from concern with its own surface.

Meanwhile, since Piero Manzoni canned his own feces and sold them in a gallery and Chris Burden had himself shot in the arm, and crucified to a Volkswagen, we have seen in art ever more fitting parables of its end, such as the self-portraits drawn by Anastasi––with his eyes closed.

"Serious" music is long dead and popular music deteriorates; poetry nears collapse and retreats from view; drama, which moved from the Absurd to Silence, is dying; and the novel is eclipsed by non-fiction as the only way to write seriously.

In a jaded, enervated age, where it seems to speak is to say less, art is certainly less. Baudelaire was obliged to claim a poet's dignity in a society which had no more dignity to hand out. A century and more later how inescapable is the truth of that condition and how much more threadbare the consolation or station of "timeless" art.

Adorno began his book thusly: "Today it goes without saying that nothing concerning art goes without saying, much less without thinking. Everything about art has become problematic; its inner life, its relation to society, even its right to exist." But *Aesthetic Theory* affirms art, just as Marcuse's last work did, testifying to despair and to the difficulty of assailing the hermetically sealed ideology of culture. And although other "radicals," such as Habermas, counsel that the desire to abolish symbolic mediation is irrational, it is becoming clearer that when we really experiment with our hearts and hands the sphere of art is shown to be pitiable. In the transfiguration we must enact, the symbolic will be left behind and art refused in favor of the real. Play, creativity, self-expression and authentic experience will recommence at that moment.

AGRICULTURE

Agriculture, the indispensable basis of civilization, was originally encountered as time, language, number and art emerged. As the materialization of alienation, agriculture is the triumph of estrangement and the definite divide between culture and nature and humans from each other.

Agriculture is the birth of production, complete with its essential features and deformation of life and consciousness. The land itself becomes an instrument of production and the planet's species its objects. Wild or tame, weeds or crops speak of that duality that cripples the soul of our being, ushering in, relatively quickly, the despotism, war and impoverishment of high civilization over the great length of that earlier oneness with nature. The forced march of civilization, which Adorno recognized in the "assumption of an irrational catastrophe at the beginning of history," which Freud felt as "something imposed on a resisting majority," of which Stanley Diamond found only "conscripts, not volunteers," was dictated by agriculture. And Mircea Eliade was correct to assess its coming as having "provoked upheavals and spiritual breakdowns" whose magnitude the modern mind cannot imagine.

"To level off, to standardize the human landscape, to efface its irregularities and banish its surprises," these words of E.M. Cioran apply perfectly to the logic of agriculture, the end of life as mainly sensuous activity, the embodiment and generator of separated life. Artificiality and work have steadily increased since its inception and are known as culture: in domesticating animals and plants man necessarily domesticated himself.

Historical time, like agriculture, is not inherent in social reality but an imposition on it. The dimension of time or history is a function of repression, whose foundation is production or agriculture. Hunter-gatherer life was anti-time in its simultaneous and spontaneous openness; farming life generates a sense of time by its successive-task narrowness, its directed routine. As the non-closure and variety of Paleolithic living gave way to the literal enclosure of agriculture, time assumed power and came to take on the character of an enclosed space. Formalized temporal reference points––ceremonies with fixed dates, the naming of days, etc.––are crucial to the ordering of the world of

production; as a schedule of production, the calendar is integral to civilization. Conversely, not only would industrial society be impossible without time schedules, the end of agriculture (basis of all production) would be the end of historical time.

Representation begins with language, a means of reining in desire. By displacing autonomous images with verbal symbols, life is reduced and brought under strict control; all direct, unmediated experience is subsumed by that supreme mode of symbolic expression, language. Language cuts up and organizes reality, as Benjamin Whorf put it, and this segmentation of nature, an aspect of grammar, sets the stage for agriculture. Julian Jaynes, in fact, concluded that the new linguistic mentality led very directly to agriculture. Unquestionably, the crystallization of language into writing, called forth mainly by the need for record-keeping of agricultural transactions, is the signal that civilization has definitively begun.

In the non-commodified, egalitarian hunter-gatherer ethos, the basis of which (as has so often been remarked) was sharing, number was not wanted. There was no ground for the urge to quantify, no reason to divide what was whole. Not until the domestication of animals and plants did this cultural concept fully emerge. Two of number's seminal figures testify clearly to its alliance with separateness and property: Pythagoras, center of a highly influential religious cult of number, and Euclid, father of mathematics and science, whose geometry originated to measure fields for reasons of ownership, taxation and slave labor. One of civilization's early forms, chieftanship, entails a linear rank order in which each member is assigned an exact numerical place. Soon, following the anti-natural linearity of plow culture, the inflexible 90-degree gridiron plan of even earliest cities appeared. Their insistent regularity constitutes in itself a repressive ideology. Culture, now numberized, becomes more firmly bounded and lifeless.

Art, too, in its relationship to agriculture, highlights both institutions. It begins as a means to interpret and subdue reality, to rationalize nature, and conforms to the great turning point which is agriculture in its basic features. The pre-Neolithic cave paintings, for example, are vivid and bold, a dynamic exaltation of animal grace and freedom. The Neolithic art of farmers and pastoralists, however, stiffens into stylized forms; Franz Borkenau typified its pottery as a "narrow, timid botching of materials and forms." With agriculture, art lost its variety and became standardized into geometric designs that tended to degenerate into dull, repetitive patterns, a perfect reflection of standardized, confined, rule-patterned life. And where there had been no representation in Paleolithic art of men killing men, an obsession with depicting confrontation between people advanced with the Neolithic period,

scenes of battles becoming common.

Time, language, number, art and all the rest of culture, which predates and leads to agriculture, rests on symbolization. Just as autonomy preceded domestication and self-domestication, the rational and the social precede the symbolic.

Food production, it is eternally and gratefully acknowledged, "permitted the cultural potentiality of the human species to develop." But what is this tendency toward the symbolic, toward the elaboration and imposition of arbitrary forms? It is a growing capacity for objectification, by which what is living becomes reified, thing-like. Symbols are more than the basic units of culture; they are screening devices to distance us from our experiences. They classify and reduce, "to do away with," in Leakey and Lewin's remarkable phrase, "the otherwise almost intolerable burden of relating one experience to another."

Thus culture is governed by the imperative of reforming and subordinating nature. The artificial environment which is agriculture accomplished this pivotal mediation, with the symbolism of objects manipulated in the construction of relations of dominance. For it is not only external nature that is subjugated: the face-to-face quality of pre-agricultural life in itself severely limited domination, while culture extends and legitimizes it.

It is likely that already during the Paleolithic era certain forms or names were attached to objects or ideas, in a symbolizing manner but in a shifting, impermanent, perhaps playful sense. The will to sameness and security found in agriculture means that the symbols became as static and constant as farming life. Regularization, rule patterning, and technological differentiation, under the sign of division of labor, interact to ground and advance symbolization. Agriculture completes the symbolic shift and the virus of alienation has overcome authentic, free life. It is the victory of cultural control; as anthropologist Marshall Sahlins puts it, "The amount of work per capita increases with the evolution of culture and the amount of leisure per capita decreases."

Today, the few surviving hunter-gatherers occupy the least "economically interesting" areas of the world where agriculture has not penetrated, such as the snows of the Inuit or desert of the Australian aborigines. And yet the refusal of farming drudgery, even in adverse settings, bears its own rewards. The Hazda of Tanzania, Filipino Tasaday, !Kung of Botswana, or the Kalahari Desert !Kung San––who were seen by Richard Lee as easily surviving a serious, several years' drought while neighboring farmers starved––also testify to Hole and Flannery's summary that "No group on earth has more leisure time than hunters and gatherers, who spend it primarily on games, conversation and

relaxing." Service rightly attributed this condition to "the very simplicity of the technology and lack of control over the environment" of such groups. And yet simple Paleolithic methods were, in their own way, "advanced." Consider a basic cooking technique like steaming foods by heating stones in a covered pit; this is immemorially older than any pottery, kettles or baskets (in fact, is anti-container in its non- surplus, non-exchange orientation) and is the most nutritionally sound way to cook, far healthier than boiling food in water, for example. Or consider the fashioning of such stone tools as the long and exceptionally thin "laurel leaf" knives, delicately chipped but strong, which modern industrial techniques cannot duplicate.

The hunting and gathering lifestyle represents the most successful and enduring adaptation ever achieved by humankind. In occasional pre-agriculture phenomena like the intensive collection of food or the systematic hunting of a single species can be seen signs of impending breakdown of a pleasurable mode that remained so static for so long precisely because it was pleasurable. The "penury and day-long grind" of agriculture, in Clark's words, is the vehicle of culture, "rational" only in its perpetual disequilibrium and its logical progression toward ever-greater destruction, as will be outlined below.

Although the term hunter-gatherer should be reversed (and has been by not a few current anthropologists) because it is recognized that gathering constitutes by far the larger survival component, the nature of hunting provides salient contrast to domestication. The relationship of the hunter to the hunted animal, which is sovereign, free and even considered equal, is obviously qualitatively different from that of the farmer or herdsman to the enslaved chattels over which he rules absolutely.

Evidence of the urge to impose order or subjugate is found in the coercive rites and uncleanness taboos of incipient religion. The eventual subduing of the world that is agriculture has at least some of its basis where ambiguous behavior is ruled out, purity and defilement defined and enforced.

Lévi-Strauss defined religion as the anthropomorphism of nature; earlier spirituality was participatory with nature, not imposing cultural values or traits upon it. The sacred means that which is separated, and ritual and formalization, increasingly removed from the ongoing activities of daily life and in the control of such specialists as shamans and priests, are closely linked with hierarchy and institutionalized power. Religion emerges to ground and legitimize culture, by means of a "higher" order of reality; it is especially required, in this function of maintaining the solidarity of society, by the unnatural demands of agriculture.

In the Neolithic village of Catal Hüyük in Turkish Anatolia, one of every three rooms were used for ritual purposes. Plowing and sowing can be seen as ritual renunciations, according to Burkert, a form of systematic repression accompanied by a sacrificial element. Speaking of sacrifice, which is the killing of domesticated animals (or even humans) for ritual purposes, it is pervasive in agricultural societies and found only there.

Some of the major Neolithic religions often attempted a symbolic healing of the agricultural rupture with nature through the mythology of the earth mother, which needless to say does nothing to restore the lost unity. Fertility myths are also central; the Egyptian Osiris, the Greek Persephone, Baal of the Canaanites, and the New Testament Jesus, gods whose death and resurrection testify to the perseverance of the soil, not to mention the human soul. The first temples signified the rise of domestication or barnyard, which in turn serves to justify the suppression of human autonomy. Whereas precivilized society was, as Redfield put it, "held together by largely undeclared but continually realized ethical conceptions," religion developed as a way of creating citizens, placing the moral order under public management.

Domestication involved the initiation of production, vastly increased division of labor, and the completed foundations of social stratification. This amounted to an epochal mutation both in the character of human existence and its development, clouding the latter with ever more violence and work. Contrary to the myth of hunter-gatherers as violent and aggressive, by the way, recent evidence shows that existing non-farmers, such as the Mbuti ("pygmies") studied by Turnbull, apparently do what killing they do without any aggressive spirit, even with a sort of regret. Warfare and the formation of every civilization or state, on the other hand, are inseparably linked.

Primal peoples did not fight over areas in which separate groups might converge in their gathering and hunting. At least "territorial" struggles are not part of the ethnographic literature and they would seem even less likely to have occurred in pre-history when resources were greater and contact with civilization non-existent.

Indeed, these peoples had no conception of private property, and Rousseau's figurative judgment, that divided society was founded by the man who first sowed a piece of ground, saying "This land is mine," and found others to believe him, is essentially valid. "Mine and thine, the seeds of all mischief, have no place with them," reads Pietro's 1511 account of the natives encountered on Columbus' second voyage. Centuries later, surviving Native Americans asked, "Sell the Earth? Why not sell the air, the clouds, the great sea?" Agriculture creates and elevates possessions; consider the *longing* root of *belongings*, as if they

ever make up for the loss.

Work, as a distinct category of life, likewise did not exist until agriculture. The human capacity of being shackled to crops and herds, devolved rather quickly. Food production overcame the common absence or paucity of ritual and hierarchy in society and introduced civilized activities like the forced labor of temple-building. Here is the real "Cartesian split" between inner and outer reality, the separation whereby nature became merely something to be "worked." On this capacity for a sedentary and servile existence rests the entire superstructure of civilization with its increasing weight of repression.

Male violence toward women originated with agriculture, which transmuted women into beasts of burden and breeders of children. Before farming, the egalitarianism of foraging life "applied as fully to women as to men," judged Eleanor Leacock, owing to the autonomy of tasks and the fact that decisions were made by those who carried them out. In the absence of production and with no drudge work suitable for child labor such as weeding, women were not consigned to onerous chores or the constant supply of babies.

Along with the curse of perpetual work, via agriculture, in the expulsion from Eden, God told woman, "I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children; and that desire shall be to thy husband, and he shall rule over thee." Similarly, the first known codified laws, those of the Sumerian king Ur-Namu, prescribed death to any woman satisfying desires outside of marriage. Thus Whyte referred to the ground women "lost relative to men when humans first abandoned a simple hunting and gathering way of life," and Simone de Beauvoir saw in the cultural equation of plow and phallus a fitting symbol of the oppression of women.

As wild animals are converted into sluggish meat-making machines, the concept of becoming "cultivated" is a virtue enforced on people, meaning the weeding out of freedom from one's nature, in the service of domestication and exploitation. As Rice points out, in Sumer, the first civilization, the earliest cities had factories with their characteristic high organization and refraction of skills. Civilization from this point exacts human labor and the mass production of food, buildings, war and authority.

To the Greeks, work was a curse and nothing else. Their name for it––*ponos*––has the same root as the Latin *poena*, sorrow. The famous Old Testament curse on agriculture as the expulsion from Paradise (Genesis 3:17-18) reminds us of the origin of work. As Mumford put it, "Conformity, repetition, patience were the keys to this [Neolithic] culture...the patient capacity for work." In this monotony and passivity of tending and waiting is born, according to Paul Shepard, the peasant's

"deep, latent resentments, crude mixtures of rectitude and heaviness, and absence of humor." One might also add a stoic insensitivity and lack of imagination inseparable from religious faith, sullenness, and suspicion among traits widely attributed to the domesticated life of farming.

Although food production by its nature includes a latent readiness for political domination and although civilizing culture was from the beginning its own propaganda machine, the changeover involved a monumental struggle. Fredy Perlman's *Against Leviathan! Against His-Story!* is unrivaled on this, vastly enriching Toynbee's attention to the "internal" and "external proletariats," discontents within and without civilization. Nonetheless, along the axis from digging stick farming to plow agriculture to fully differentiated irrigation systems, an almost total genocide of gatherers and hunters was necessarily effected.

The formation and storage of surpluses are part of the domesticating will to control and make static, an aspect of the tendency to symbolize. A bulwark against the flow of nature, surplus takes the forms of herd animals and granaries. Stored grain was the earliest medium of equivalence, the oldest form of capital. Only with the appearance of wealth in the shape of storable grains do the gradations of labor and social classes proceed. While there were certainly wild grains before all this (and wild wheat, by the way, is 24 percent protein compared to 12 percent for domesticated wheat), the bias of culture makes every difference. Civilization and its cities rested as much on granaries as on symbolization.

The mystery of agriculture's origin seems even more impenetrable in light of the recent reversal of long-standing notions that the previous era was one of hostility to nature and an absence of leisure. "One could no longer assume," wrote Arme, "that early man domesticated plants and animals to escape drudgery and starvation. If anything, the contrary appeared true, and the advent of farming saw the end of innocence." For a long time, the question was "Why wasn't agriculture adopted much earlier in human evolution?" More recently, we know that agriculture, in Cohen's words, "is not easier than hunting and gathering and does not provide a higher quality, more palatable, or more secure food base." Thus the consensus question now is, "Why was it adopted at all?"

Many theories have been advanced, none convincingly. Childe and others argue that population increase pushed human societies into more intimate contact with other species, leading to domestication and the need to produce in order to feed the additional people. But it has been shown rather conclusively that population increase did not precede agriculture but was caused by it. "I don't see any evidence anywhere in the world," concluded Flannery, "that suggests that population pressure

was responsible for the beginning of agriculture." Another theory has it that major climatic changes occurred at the end of the Pleistocene, about 11,000 years ago, that upset the old hunter-gatherer life-world and led directly to the cultivation of certain surviving staples. Recent dating methods have helped demolish this approach; no such climatic shift happened that could have forced the new mode into existence. Besides, there are scores of examples of agriculture being adopted––or refused––in every type of climate. Another major hypothesis is that agriculture was introduced via a chance discovery or invention as if it had never occurred to the species before a certain moment that, for example, food grows from sprouted seeds. It seems certain that Paleolithic humanity had a virtually inexhaustible knowledge of flora and fauna for many tens of thousands of years before the cultivation of plants began, which renders this theory especially weak.

Agreement with Carl Sauer's summation that, "Agriculture did not originate from a growing or chronic shortage of food" is sufficient, in fact, to dismiss virtually all originary theories that have been advanced. A remaining idea, presented by Hahn, Isaac and others, holds that food production began at base as a religious activity. This hypothesis comes closest to plausibility.

Sheep and goats, the first animals to be domesticated, are known to have been widely used in religious ceremonies, and to have been raised in enclosed meadows for sacrificial purposes. Before they were domesticated, moreover, sheep had no wool suitable for textile purposes. The main use of the hen in southeastern Asia and the eastern Mediterranean––the earliest centers of civilization––"seems to have been," according to Darby, "sacrificial or divinatory rather than alimentary." Sauer adds that the "egg laying and meat producing qualities" of tamed fowl "are relatively late consequences of their domestication." Wild cattle were fierce and dangerous; neither the docility of oxen nor the modified meat texture of such castrates could have been foreseen. Cattle were not milked until centuries after their initial captivity, and representations indicate that their first known harnessing was to wagons in religious processions.

Plants, next to be controlled, exhibit similar backgrounds so far as is known. Consider the New World examples of squash and pumpkin, used originally as ceremonial rattles. Johannessen discussed the religious and mystical motives connected with the domestication of maize, Mexico's most important crop and center of its native Neolithic religion. Likewise, Anderson investigated the selection and development of distinctive types of various cultivated plants because of their magical significance. The shamans, I should add, were well-placed in positions of power to introduce agriculture via the taming and planting involved in ritual and

religion, sketchily referred to above.

Though the religious explanation of the origins of agriculture has been somewhat overlooked, it brings us, in my opinion, to the very doorstep of the real explanation of the birth of production: that non-rational, cultural force of alienation which spread, in the forms of time, language, number and art, to ultimately colonize material and psychic life in agriculture. "Religion" is too narrow a conceptualization of this infection and its growth. Domination is too weighty, too all-encompassing to have been solely conveyed by the pathology that is religion.

But the cultural values of control and uniformity that are part of religion are certainly part of agriculture, and from the beginning. Noting that strains of corn cross-pollinate very easily, Anderson studied the very primitive agriculturalists of Assam, the Naga tribe, and their variety of corn that exhibited no differences from plant to plant. True to culture, showing that it is complete from the beginning of production, the Naga kept their varieties so pure "only by a fanatical adherence to an ideal type." This exemplifies the marriage of culture and production in domestication, and its inevitable progeny, repression and work.

The scrupulous tending of strains of plants finds its parallel in the domesticating of animals, which also defies natural selection and re-establishes the controllable organic world at a debased, artificial level. Like plants, animals are mere things to be manipulated; a cow, for instance, is seen as a kind of machine for converting grass to milk. Transmuted from a state of freedom to that of helpless parasites, these animals become completely dependent on man for survival. In domestic mammals, as a rule, the size of the brain becomes relatively smaller as specimens are produced that devote more energy to growth and less to activity. Placid, infantilized, typified perhaps by the sheep, most domesticated of herd animals; the remarkable intelligence of wild sheep is completely lost in their tamed counterparts. The social relationships among domestic animals are reduced to the crudest essentials. Non-reproductive parts of the life cycle are minimized, courtship is curtailed, and the animal's very capacity to recognize its own species is impaired.

Farming also created the potential for rapid environmental destruction and the domination over nature soon began to turn the green mantle that covered the birthplaces of civilization into barren and lifeless areas. "Vast regions have changed their aspect completely," estimates Zeuner, "always to quasi-drier condition, since the beginnings of the Neolithic." Deserts now occupy most of the areas where the high civilizations once flourished, and there is much historical evidence that these early formations inevitably ruined their environments.

Throughout the Mediterranean Basin and in the adjoining Near East

and Asia, agriculture turned lush and hospitable lands into depleted, dry, and rocky terrain. In *Critias*, Plato described Attica as "a skeleton wasted by disease," referring to the deforestation of Greece and contrasting it to its earlier richness. Grazing by goats and sheep, the first domesticated ruminants, was a major factor in the denuding of Greece, Lebanon, and North Africa, and the desertification of the Roman and Mesopotamian empires.

Another, more immediate impact of agriculture, brought to light increasingly in recent years, involved the physical well-being of its subjects. Lee and Devore's researches show that "the diet of gathering peoples was far better than that of cultivators, that starvation is rare, that their health status was generally superior, and that there is a lower incidence of chronic disease." Conversely, Farb summarized, "Production provides an inferior diet based on a limited number of foods, is much less reliable because of blights and the vagaries of weather, and is much more costly in terms of human labor expended."

The new field of paleopathology has reached even more emphatic conclusions, stressing, as does Angel, the "sharp decline in growth and nutrition caused by the changeover from food gathering to food production. Earlier conclusions about life span have also been revised. Although eyewitness Spanish accounts of the sixteenth century tell of Florida Indian fathers seeing their fifth generation before passing away, it was long believed that primitive people died in their 30's and 40's. Robson, Boyden and others have dispelled the confusion of longevity with life expectancy and discovered that current hunter-gatherers, barring injury and severe infection, often outlive their civilized contemporaries. During the industrial age only fairly recently did life span lengthen for the species, and it is now widely recognized that in Paleolithic times humans were long-lived animals, once certain risks were passed. DeVries is correct in his judgment that duration of life dropped sharply upon contact with civilization.

"Tuberculosis and diarrheal disease had to await the rise of farming, measles and bubonic plague the appearance of large cities," wrote Jared Diamond. Malaria, probably the single greatest killer of humanity, and nearly all other infectious diseases are the heritage of agriculture. Nutritional and degenerative diseases in general appear with the reign of domestication and culture. Cancer, coronary thrombosis, anemia, dental caries, and mental disorders are but a few of the hallmarks of agriculture; previously women gave birth with no difficulty and little or no pain.

People were far more alive in all their senses. !Kung San, reported R.H. Post, have heard a single-engine plane while it was still 70 miles away, and many of them can see four moons of Jupiter with the naked eye. The

summary judgment of Harris and Ross, as to "an overall decline in the quality––and probably in the length––of human life among farmers as compared with earlier hunter-gatherer groups," is understated.

One of the most persistent and universal ideas is that there was once a Golden Age of innocence before history began. Hesiod, for instance, referred to the "life-sustaining soil, which yielded its copious fruits unbribed by toil." Eden was clearly the home of the hunter-gatherers and the yearning expressed by the historical images of paradise must have been that of disillusioned tillers of the soil for a lost life of freedom and relative ease.

The history of civilization shows the increasing displacement of nature from human experience, characterized in part by a narrowing of food choices. According to Rooney, prehistoric peoples found sustenance in over 1500 species of wild plants, whereas "All civilizations," Wenke reminds us," have been based on the cultivation of one or more of just six plant species: wheat, barley, millet, rice, maize, and potatoes."

It is a striking truth that over the centuries "the number of different edible foods which are actually eaten," Pyke points out, "has steadily dwindled." The world's population now depends for most of its subsistence on only about 20 genera of plants while their natural strains are replaced by artificial hybrids and the genetic pool of these plants becomes far less varied.

The diversity of food tends to disappear or flatten out as the proportion of manufactured foods increases. Today the very same articles of diet are distributed worldwide, so that an Inuit Eskimo and an African may soon be eating powdered milk manufactured in Wisconsin or frozen fish sticks from a single factory in Sweden. A few big multinationals such as Unilever, the world's biggest food production company, preside over a highly integrated service system in which the object is not to nourish or even to feed, but to force an ever-increasing consumption of fabricated, processed products upon the world.

When Descartes enunciated the principle that the fullest exploitation of matter to *any* use is the whole duty of man, our separation from nature was virtually complete and the stage was set for the Industrial Revolution. Three hundred and fifty years later this spirit lingered in the person of Jean Vorst, Curator of France's Museum of Natural History, who pronounced that our species, "because of intellect," can no longer re-cross a certain threshold of civilization and once again become part of a natural habitat. He further stated, expressing perfectly the original and persevering imperialism of agriculture, "As the earth in its primitive state is not adopted to our expansion, man must shackle it to fulfill human destiny."

The early factories literally mimicked the agricultural model,

indicating again that at base all mass production is farming. The natural world is to be broken and forced to work. One thinks of the mid-American prairies where settlers had to yoke six oxen to plow in order to cut through the soil for the first time. Or a scene from the 1870s in *The Octopus* by Frank Norris, in which gang-plows were driven like "a great column of field artillery" across the San Joaquin Valley, cutting 175 furrows at once.

Today the organic, what is left of it, is fully mechanized under the aegis of a few petrochemical corporations. Their artificial fertilizers, pesticides, herbicides and near-monopoly of the world's seed stock define a total environment that integrates food production from planting to consumption. Although Lévi-Strauss is right that "Civilization manufactures monoculture like sugar beets," only since World War II has a completely synthetic orientation begun to dominate.

Agriculture takes more organic matter out of the soil than it puts back, and soil erosion is basic to the monoculture of annuals. Regarding the latter, some are promoted with devastating results to the land; along with cotton and soybeans, corn, which in its present domesticated state is totally dependent on agriculture for its existence, is especially bad. J.Russell Smith called it "the killer of continents...and one of the worst enemies of the human future." The erosion cost of one bushel of Iowa corn is two bushels of topsoil, highlighting the more general large-scale industrial destruction of farmland. The continuous tillage of huge monocultures, with massive use of chemicals and no application of manure or humus, obviously raises soil deterioration and soil loss to much higher levels.

The dominant agricultural mode has it that soil needs massive infusions of chemicals, supervised by technicians whose overriding goal is to maximize production. Artificial fertilizers and all the rest from this outlook eliminate the need for the complex life of the soil and indeed convert it into a mere instrument of production. The promise of technology is total control, a completely contrived environment that simply supersedes the natural balance of the biosphere.

But more and more energy is expended to purchase great monocultural yields that are beginning to decline, never mind the toxic contamination of the soil, ground water and food. The U.S. Department of Agriculture says that cropland erosion is occurring in this country at a rate of two billion tons of soil a year. The National Academy of Sciences estimates that over one third of topsoil is already gone forever. The ecological imbalance caused by monocropping and synthetic fertilizers causes enormous increases in pests and crop diseases; since World War II, crop loss due to insects has actually doubled. Technology responds, of course, with spiraling applications of more synthetic fertilizers, and

"weed" and "pest" killers, accelerating the crime against nature.

Another post-war phenomenon was the Green Revolution, billed as the salvation of the impoverished Third World by American capital and technology. But rather than feeding the hungry, the Green Revolution drove millions of poor people from farmlands in Asia, Latin America and Africa as victims of the program that fosters large corporate farms. It amounted to an enormous technological colonization creating dependency on capital-intensive agribusiness, destroying older agrarian communalism, requiring massive fossil fuel consumption and assaulting nature on an unprecedented scale.

Desertification, or loss of soil due to agriculture, has been steadily increasing. Each year, a total area equivalent to more than two Belgiums is being converted to desert worldwide. The fate of the world's tropical rainforests is a factor in the acceleration of this desiccation: half of them have been erased in the past thirty years. In Botswana, the last wilderness region of Africa has disappeared like much of the Amazon jungle and almost half of the rainforests of Central America, primarily to raise cattle for the hamburger markets in the U.S. and Europe. The few areas safe from deforestation are where agriculture doesn't want to go; the destruction of the land is proceeding in the U.S. over a greater land area than was encompassed by the original thirteen colonies, just as it was at the heart of the severe African famine of the mid-1980s and the extinction of one species of wild animal and plant after another.

Returning to animals, one is reminded of the words of Genesis in which God said to Noah, "And the fear of you and the dread of you shall be upon every fowl of the air, upon all that moveth upon the earth, and upon all the fishes of the sea; into your hands are they delivered." When newly discovered territory was first visited by the advance guard of production, as a wide descriptive literature shows, the wild mammals and birds showed no fear whatsoever of the explorers. The agriculturalized mentality, however, so aptly foretold in the biblical passage, projects an exaggerated belief in the fierceness of wild creatures, which follows from progressive estrangement and loss of contact with the animal world, plus the need to maintain dominance over it.

The fate of domestic animals is defined by the fact that agricultural technologists continually look to factories as models of how to refine their own production systems. Nature is banished from these systems as, increasingly, farm animals are kept largely immobile throughout their deformed lives, maintained in high-density, wholly artificial environments. Billions of chickens, pigs, and veal calves, for example, no longer even see the light of day much less roam the fields, fields growing more silent as more and more pastures are plowed up to grow feed for

these hideously confined beings.

The high-tech chickens, whose beak ends have been clipped off to reduce death from stress-induced fighting, often exist four or even five to a 12" by 18" cage and are periodically deprived of food and water for up to ten days to regulate their egg-laying cycles. Pigs live on concrete floors with no bedding; foot-rot, tail-biting and cannibalism are endemic because of physical conditions and stress. Sows nurse their piglets separated by metal grates, mother and offspring barred from natural contact. Veal calves are often raised in darkness, chained to stalls so narrow as to disallow turning around or other normal posture adjustment. These animals are generally under regimens of constant medication due to the tortures involved and their heightened susceptibility to diseases; automated animal production relies upon hormones and antibiotics. Such systematic cruelty, not to mention the kind of food that results, brings to mind the fact that captivity itself and every form of enslavement has agriculture as its progenitor or model.

Food has been one of our most direct contacts with the natural environment, but we are rendered increasingly dependent on a technological production system in which finally even our senses have become redundant; taste, once vital for judging a food's value or safety, is no longer experienced, but rather certified by a label. Overall, the healthfulness of what we consume declines and land once cultivated for food now produces coffee, tobacco, grains for alcohol, marijuana, and other drugs, creating the context for famine. Even the non-processed foods like fruits and vegetables are now grown to be tasteless and uniform because the demands of handling, transport and storage, not nutrition or pleasure, are the highest considerations.

Total war borrowed from agriculture to defoliate millions of acres in Southeast Asia during the Vietnam War, but the plundering of the biosphere proceeds even more lethally in its daily, global forms. Food as a function of production has also failed miserably on the most obvious level: half of the world, as everyone knows, suffers from malnourishment ranging to starvation itself.

Meanwhile, the "diseases of civilization," as discussed by Eaton and Konner in the January 31, 1985 *New England Journal of Medicine* and contrasted with the healthful pre-farming diets, underline the joyless, sickly world of chronic maladjustment we inhabit as prey of the manufacturers of medicine, cosmetics, and fabricated food. Domestication reaches new heights of the pathological in genetic food engineering, with new types of animals in the offing as well as contrived microorganisms and plants. Logically, humanity itself will also become a domesticate of this order as the world of production processes us as much as it degrades and deforms every other natural system.

The project of subduing nature, begun and carried through by agriculture, has assumed gigantic proportions. The "success" of civilization's progress, a success earlier humanity never wanted, tastes more and more like ashes. James Serpell summed it up this way: "In short we appear to have reached the end of the line. We cannot expand; we seem unable to intensify production without wreaking further havoc, and the planet is fast becoming a wasteland."

Physiologist Jared Diamond termed the initiation of agriculture "a catastrophe from which we have never recovered." Agriculture has been and remains a "catastrophe" at all levels, the one which underpins the entire material and spiritual culture of alienation now destroying us. Liberation is impossible without its dissolution.

DOMESTICATION NEWS

Worth noting is a concise article in the March 4, 1993 issue of the British journal *Nature*. Almost 4,000 years of agriculture in central Mexico yield a dramatic picture to the research efforts of archaeologists O'Hara, Street-Perrot, and Burt. Conclusively debunked is the notion that traditional farming methods were more benign that more modern methods.

Severe soil erosion and other forms of environmental degradation commenced, in fact, with agriculture itself. By the time of the Spanish conquest (1521 A.D.), contrary to widespread belief, Mesoamerica presented anything but a pristine landscape. "Erosion caused by the Spanish introduction of plough agriculture," the authors observe from exhaustive soil samples, "was apparently no more severe than that associated with traditional agricultural methods." As they explain later in the article, "it is hard to distinguish any specific impact of the introduction of plough agriculture and draught animals by the Spanish after A.D. 1521."

The point is plain: domestication is domestication, and embodies a qualitatively negative logic for the natural world. Agriculture per se brings a ruinous, unidirectional impact, despite the wishful thinking of those who envision a coexistence with domestication, consisting of benign, "green" methods that would reverse the global destruction of the land.

The devastation exists on a much more basic level, whose reality must be faced. As the article concludes, "There is a move by many environmental agencies both in Mexico and elsewhere for a return to traditional forms of agriculture, as they are considered to be better for the environment. As our findings indicate that traditional farming techniques cause significant erosion, it is unlikely that a return to prehistoric farming methods would solve the problem of environmental degradation."

PATRIARCHY, CIVILIZATION AND THE ORIGINS OF GENDER

Civilization, very fundamentally, is the history of the domination of nature and of women. Patriarchy means rule over women and nature. Are the two institutions at base synonymous?

Philosophy has mainly ignored the vast realm of suffering that has unfolded since it began, in division of labor, its long course. Hélène Cixous calls the history of philosophy a "chain of fathers." Women are as absent from it as suffering, and are certainly the closest of kin.

Camille Paglia, anti-feminist literary theorist, meditates thusly on civilization and women:

> When I see a giant crane passing on a flatbed truck, I pause in awe and reverence, as one would for a church procession. What power of conception: what grandiosity: these cranes tie us to ancient Egypt, where monumental architecture was first imagined and achieved. If civilization has been left in female hands, we would still be living in grass huts.[1]

The "glories" of civilization and women's disinterest in them. To some of us the "grass huts" represent not taking the wrong path, that of oppression and destructiveness. In light of the globally metastasizing death drive of technological civilization, if *only* we still lived in grass huts!

Women and nature are universally devalued by the dominant paradigm and who cannot see what this has wrought? Ursula Le Guin gives us a healthy corrective to Paglia's dismissal of both:

> Civilized Man says: I am Self, I am Master, all the rest is other—outside, below, underneath, subservient. I own, I use, I explore, I exploit, I control. What I do is what matters. What I want

> is what matter is for. I am that I am, and the rest is women and wilderness, to be used as I see fit.[2]

There are certainly many who believe that early civilizations existed that were matriarchal. But no anthropologists or archaeologists, feminists included, have found evidence of such societies. "The search for a genuinely egalitarian, let along matriarchal, culture has proved fruitless," concludes Sherry Ortner.[3]

There was, however, a long span of time when women were generally less subject to men, before male-defined culture became fixed or universal. Since the 1970s anthropologists such as Adrienne Zihlman, Nancy Tanner and Frances Dahlberg[4] have corrected the earlier focus or stereotype of prehistoric "Man the Hunter" to that of "Woman the Gatherer." Key here is the datum that as a general average, pre-agricultural band societies received about 80 percent of their sustenance from gathering and 20 percent from hunting. It is possible to overstate the hunting/gathering distinction and to overlook those groups in which, to significant degrees, women have hunted and men have gathered.[5] But women's autonomy in foraging societies is rooted in the fact that material resources for subsistence are equally available to women and men in their respective spheres of activity.

In the context of the generally egalitarian ethos of hunter-gatherer or foraging societies, anthropologists like Eleanor Leacock, Patricia Draper and Mina Caulfield have described a generally equal relationship between men and women.[6] In such settings where the person who procures something also distributes it and where women procure about 80 percent of the sustenance, it is largely women who determine band society movements and camp locations. Similarly, evidence indicates that both women and men made the stone tools used by pre-agricultural peoples.[7]

With the matrilocal Pueblo, Iroquois, Crow, and other American Indian groups, women could terminate a marital relationship at any time. Overall, males and females in band society move freely and peacefully from one band to another as well as into or out of relationships.[8] According to Rosalind Miles, the men not only do not command or exploit women's labor, "they exert little or no control over women's bodies or those of their children, making no fetish of virginity or chastity, and making no demands of women's sexual exclusivity."[9] Zubeeda Banu Quraishy provides an African example: "Mbuti gender associations were characterized by harmony and cooperation."[10]

And yet, one wonders, was the situation really ever quite this rosy? Given an apparently universal devaluation of women, which varies

in its forms but not in its essence, the question of when and how it was basically otherwise persists. There is a fundamental division of social existence according to gender, and an obvious hierarchy to this divide. For philosopher Jane Flax, the most deep-seated dualisms, even including those of subject-object and mind-body, are a reflection of gender disunity.[11]

Gender is not the same as the natural/physiological distinction between the sexes. It is a cultural categorization and ranking grounded in a sexual division of labor that may be the single cultural form of greatest significance. If gender introduces and legitimates inequality and domination, what could be more important to put into question? So in terms of origins—and in terms of our future—the question of human society without gender presents itself.

We know that division of labor led to domestication and civilization, and drives the globalized system of domination today. It also appears that artificially imposed sexual division of labor was its earliest form and was also, in effect, the formation of gender.

Sharing food has long been recognized as a hallmark of the foraging life-way. Sharing the responsibility for the care of offspring, too, which can still be seen among the few remaining hunter-gatherer societies, in contrast to privatized, isolated family life in civilization. What we think of as the family is not an eternal institution, any more than exclusively female mothering was inevitable in human evolution.[12]

Society is integrated via the division of labor and the family is integrated via the sexual division of labor. The need for integration bespeaks a tension, a split that calls for a basis for cohesion or solidarity. In this sense Testart is right: "Inherent in kinship is hierarchy."[13] And with their basis in division of labor, the relations of kinship become relations of production. "Gender is inherent in the very nature of kinship," as Cucchiari points out, "which could not exist without it."[14] It is in this area that the root of the domination of nature as well as of women may be explored.

As combined group foraging in band societies gave way to specialized roles, kinship structures formed the infrastructure of relationships that developed in the direction of inequality and power differentials. Women typically became immobilized by a privatizing child care role; this pattern deepened later on, beyond the supposed requirements of that gender role. This gender-based separation and division of labor began to occur around the transition from the Middle to Upper Paleolithic eras.[15]

Gender and the kinship system are cultural constructs set over and against the biological subjects involved, "above all a symbolic organization of behavior," according to Juliet Mitchell.[16] It may be more telling to look at symbolic culture itself as required by gendered society,

by "the need to mediate symbolically a severely dichotomized cosmos."[17] The which-came-first question introduces itself, and is difficult to resolve. It is clear, however, that there is no evidence of symbolic activity (e.g. cave paintings) until the gender system, based on sexual division of labor, was apparently under way.[18]

By the Upper Paleolithic, that epoch immediately prior to the Neolithic Revolution of domestication and civilization, the gender revolution had won the day. Masculine and feminine signs are present in the first cave art, about 35,000 years ago. Gender consciousness arises as an all-encompassing ensemble of dualities, a specter of divided society. In the new polarization activity becomes gender-related, gender-defined. The role of hunter, for example, develops into association with males, its requirements attributed to the male gender as desired traits.

That which had been far more unitary or generalized, such as group foraging or communal responsibility for child tending, had now become the separated spheres in which sexual jealousy and possessiveness appear. At the same time, the symbolic emerges as a separate sphere or reality. This is revealing in terms of the content of art, as well as ritual and its practice. It is hazardous to extrapolate from the present to the remote past, yet surviving non-industrialized cultures may shed some light. The Bimin-Kushusmin of Papua New Guinea, for example, experience the masculine-feminine split as fundamental and defining. The masculine "essence," called *finiik*, not only signifies powerful, warlike qualities but also those of ritual and control. The feminine "essence," or *khaapkhabuurien*, is wild, impulsive, sensuous, and ignorant of ritual.[19] Similarly, the Mansi of northwestern Siberia place severe restrictions on women's involvement in their ritual practices.[20] With band societies, it is no exaggeration to say that the presence or absence of ritual is crucial to the question of the subordination of women.[21] Gayle Rubin concludes that the "world-historical defeat of women occurred with the origins of culture and is a prerequisite of culture."[22]

The simultaneous rise of symbolic culture and gendered life is not a coincidence. Each of them involves a basic shift from non-separated, non-hierarchized life. The logic of their development and extension is a response to tensions and inequalities that they incarnate; both are dialectically interconnected to earliest, artificial division of labor.

On the heels, relatively speaking, of the gender/symbolic alteration came another Great Leap Forward, into agriculture and civilization. This is the definitive "rising above nature," overriding the previous two million years of non-dominating intelligence and intimacy with nature. This change was decisive as a consolidation and intensification of the division of labor. Meillasoux reminds us of its beginnings:

> Nothing in nature explains the sexual division of labor, nor such institutions as marriage, conjugality or paternal filiation. All are imposed on women by constraint, all are therefore facts of civilization which must be explained, not used as explanations.[23]

Kelkar and Nathan, for example, did not find very much gender specialization among hunter-gatherers in western India, compared to agriculturalists there.[24] The transition from foraging to food production brought similar radical changes in societies everywhere. It is instructive, to cite another example closer to the present, that the Muskogee people of the American Southeast upheld the intrinsic value of the untamed, undomesticated forest; colonial civilizers attacked this stance by trying to replace Muskogee matrilineal tradition with patrilineal relations.[25]

The locus of the transformation of the wild to the cultural is the domicile, as women become progressively limited to its horizons. Domestication is grounded here (etymologically as well, from the Latin *domus*, or household): drudge work, less robusticity than with foraging, many more children, and a lower life expectancy than males are among the features of agricultural existence for women.[26] Here another dichotomy appears, the distinction between work and non-work, which for so many, many generations did not exist. From the gendered production site and its constant extension come further foundations of our culture and mentality.

Confined, if not fully pacified, women are defined as passive. Like nature, of value as something to be made to produce; awaiting fertilization, activation from outside herself/ itself. Women experience the move from autonomy and relative equality in small, mobile anarchic groups to controlled status in large, complex governed settlements.

Mythology and religion, compensations of divided society, testify to the reduced position of women. In Homer's Greece, fallow land (not domesticated by grain culture) was considered feminine, the abode of Calypso, of Circe, of the Sirens who tempted Odysseus to abandon civilization's labors. Both land and women are again subjects of domination. But this imperialism betrays traces of guilty conscience, as in the punishments for those associated with domestication and technology, in the tales of Prometheus and Sisyphus. The project of agriculture was felt, in some areas more than others, as a violation; hence, the incidence of rape in the stories of Demeter. Over time as the losses mount, the great mother-daughter relationships of Greek myth–– Demeter-Kore, Clytemnestra-Iphigenia, Jocasta-Antigone, for example––

disappear.

In Genesis, the Bible's first book, woman is born from the body of man. The Fall from Eden represents the demise of hunter-gatherer life, the expulsion into agriculture and hard labor. It is blamed on Eve, of course, who bears the stigma of the Fall.[27] Quite an irony, in that domestication is the fear and refusal of nature and woman, while the Garden myth blames the chief victim of its scenario, in reality.

Agriculture is a conquest that fulfills what began with gender formation and development. Despite the presence of goddess figures, wedded to the touchstone of fertility, in general Neolithic culture is very concerned with virility. From the emotional dimensions of this masculinism, as Cauvin sees it, animal domestication must have been principally a male initiative.[28] The distancing and power emphasis have been with us ever since; frontier expansion, for instance, as male energy subduing female nature, one frontier after another.

This trajectory has reached overwhelming proportions, and we are told on all sides that we cannot avoid our engagement with ubiquitous technology. But patriarchy too is everywhere, and once again the inferiority of nature is presumed. Fortunately "many feminists," says Carol Stabile, hold that "a rejection of technology is fundamentally identical to a rejection of patriarchy."[29]

There are other feminists who claim a part of the technological enterprise, which posits a virtual, cyborg "escape from the body" and its gendered history of subjugation. But this flight is illusory, a forgetting of the whole train and logic of oppressive institutions that make up patriarchy. The dis-embodied high-tech future can only be more of the same destructive course.

Freud considered taking one's place as a gendered subject to be foundational, both culturally and psychologically. But his theories assume an already present gendered subjectivity, and thus beg many questions. Various considerations remain unaddressed, such as gender as an expression of power relations, and the fact that we enter this world as bisexual creatures.

Carla Freeman poses a pertinent question with her essay titled, "Is Local: Global as Feminine: Masculine? Rethinking the Gender of Globalization".[30]

The general crisis of modernity has its roots in the imposition of gender. Separation and inequality begin here at the period when symbolic culture itself emerges, soon becoming definitive as domestication and civilization: patriarchy. The hierarchy of gender can no more be reformed than the class system or globalization. Without a deeply radical women's liberation we are consigned to the deadly swindle and mutilation now dealing out a fearful toll everywhere. The

wholeness of original genderlessness may be a prescription for our redemption.

ENDNOTES

1. Camille Paglia, *Sexual Personae: Art and Decadence from Nefertiti to Emily Dickinson* (Yale University Press: New Haven, 1990), p. 38.
2. Ursula Le Guin, "Women/Wildness," in Judith Plant, ed., *Healing the Wounds* (New Society: Philadelphia, 1989), p. 45.
3. Sherry B. Ortner, *Making Gender: the Politics and Erotics of Culture* (Beacon Press: Boston, 1996), p. 24. See also Cynthia Eller, *The Myth of Matriarchal Prehistory: Why an Invented Past Won't Give Women a Future* (Beacon Press: Boston, 2000).
4. For example, Adrienne L. Zihlman and Nancy Tanner, "Gathering and Hominid Adaptation," in Lionel Tiger and Heather Fowler, eds., *Female Hierarchies* (Beresford: Chicago, 1978); Adrienne L. Zihlman, "Women in Evolution," *Signs* 4 (1978); Frances Dahlberg, *Woman the Gatherer* (Yale University Press: New Haven, 1981); Elizabeth Fisher, *Woman's Creation: Sexual Evolution and the Shaping of Society* (Anchor/Doubleday: Garden City NY, 1979).
5. James Steele and Stephan Shennan, eds., *The Archaeology of Human Ancestry* (Routledge: New York, 1995), p. 349. Also, M. Kay Martin and Barbara Voorhies, *Female of the Species* (Columbia University Press: New York, 1975), pp 210-211, for example.
6. Leacock is among the most insistent, claiming that whatever male domination exists in surviving societies of this kind is due to the effects of colonial domination. See Eleanor Burke Leacock, "Women's Status in Egalitarian Society," *Current Anthropology* 19 (1978); and her *Myths of Male Dominance* (Monthly Review Press: New York, 1981). See also S. and G. Cafferty, "Powerful Women and the Myth of Male Dominance in Aztec Society," *Archaeology from Cambridge* 7 (1988).
7. Joan Gero and Margaret W. Conkey, eds., *Engendering Archaeology* (Blackwell: Cambridge MA, 1991); C.F.M. Bird, "Woman the Toolmaker," in *Women in Archaeology* (Research School of Pacific and Asian Studies: Canberra, 1993).
8. Claude Meillasoux, *Maidens, Meal and Money* (Cambridge University Press: Cambridge, 1981), p. 16.
9. Rosalind Miles, *The Women's History of the World* (Michael Joseph: London, 1986), p. 16.
10. Zubeeda Banu Quraishy, "Gender Politics in the Socio-Economic Organization of Contemporary Foragers," in Ian Keen and Takako Yamada, eds., *Identity and Gender in Hunting and Gathering Societies* (National Museum of Ethnology: Osaka, 2000), p. 196.
11. Jane Flax, "Political Philosophy and the Patriarchal Unconscious," in Sandra Harding and Merrill B. Hintikka, eds., *Discovering Reality* (Reidel: Dortrecht, 1983), pp 269-270.
12. See Patricia Elliott, *From Mastery to Analysis: Theories of Gender in Psychoanalytic Feminism* (Cornell University Press: Ithaca, 1991), e.g. p. 105.
13. Alain Testart, "Aboriginal Social Inequality and Reciprocity," *Oceania* 60 (1989), p. 5.
14. Salvatore Cucchiari, "The Gender Revolution and the Transition from Bisexual Horde to Patrilocal Band," in Sherry B. Ortner and Harriet Whitehead, eds., *Sexual*

Meanings: The Cultural Construction of Gender and Sexuality (Cambridge University Press: Cambridge UK, 1984), p. 36. This essay is of great importance.
15. Olga Soffer, "Social Transformations at the Middle to Upper Paleolithic Transition," in Günter Brauer and Fred H. Smith, eds., *Replacement: Controversies in Homo Sapiens Evolution* (A.A. Balkema: Rotterdam 1992), p. 254.
16. Juliet Mitchell, *Women: The Longest Revolution* (Virago Press: London, 1984), p. 83.
17. Cucchiari, op.cit., p. 62.
18. Robert Briffault, *The Mothers: the Matriarchal Theory of Social Origins* (Macmillan: New York, 1931), p. 159.
19. Theodore Lidz and Ruth Williams Lidz, *Oedipus in the Stone Age* (International Universities Press: Madison CT, 1988), p. 123.
20. Elena G. Fedorova, "The Role of Women in Mansi Society," in Peter P. Schweitzer, Megan Biesele and Robert K. Hitchhock, eds., *Hunters and Gatherers in the Modern World* (Berghahn Books: New York, 2000), p. 396.
21. Steven Harrall, *Human Families* (Westview Press: Boulder CO, 1997), p. 89. "Examples of the link between ritual and inequality in forager societies are widespread," according to Stephan Shennan, "Social Inequality and the Transmission of Cultural Traditions in Forager Societies," in Steele and Shennan, *op.cit*., p. 369.
22. Gayle Rubin, "The Traffic in Women," *Toward an Anthropology of Women* (Monthly Review Press: New York, 1979), p. 176.
23. Meillasoux, *op.cit*., pp 20-21.
24. Cited by Indra Munshi, "Women and Forest: A Study of the Warlis of Western India," in Govind Kelkar, Dev Nathan and Pierre Walter, eds., *Gender Relations in Forest Societies in Asia: Patriarchy at Odds* (Sage: New Delhi, 2003), p. 268.
25. Joel W. Martin, *Sacred Revolt: The Muskogees' Struggle for a New World* (Beacon Press: Boston, 1991), pp 99, 143.
26. The production of maize, one of North America's contributions to domestication, "had a tremendous effect on women's work and women's health." Women's status "was definitely subordinate to that of males in most of the horticultural societies of [what is now] the eastern United States" by the time of first European contact. The reference is from Karen Olsen Bruhns and Karen E. Stothert, *Women in Ancient America* (University of Oklahoma Press: Norman, 1999), p. 88. Also, for example, Gilda A. Morelli, "Growing Up Female in a Farmer Community and a Forager Community," in Mary Ellen Mabeck, Alison Galloway and Adrienne Zihlman, eds., *The Evolving Female* (Princeton University Press: Princeton, 1997): "Young Efe [Zaire] forager children are growing up in a community where the relationship between men and women is far more egalitarian than is the relationship between farmer men and women" (p. 219). See also Catherine Panter- Brick and Tessa M. Pollard, "Work and Hormonal Variation in Subsistence and Industrial Contexts," in C. Panter-Brick and C.M. Worthman, eds., *Hormones, Health, and Behavior* (Cambridge University Press: Cambridge, 1999), in terms of how much more work is done, compared to men, by women who farm vs. those who forage.
27. The Etoro people of Papua New Guinea have a very similar myth in which Nowali, known for her hunting prowess, bears responsibility for the Etoros' fall from a state of well-being. Raymond C. Kelly, *Constructing Inequality* (University of Michigan Press: Ann Arbor, 1993), p. 524.
28. Jacques Cauvin, *The Birth of the Gods and the Origins of Nature* (Cambridge University Press: Cambridge, 2000), p. 133.
29. Carol A. Stabile, *Feminism and the Technological Fix* (Manchester University

Press: Manchester, 1994), p. 5.
30. Carla Freeman, "Is Local:Global as Feminine:Masculine? Rethinking the Gender of Globalization," *Signs* 26 (2001).

On the Origins of War

War is a staple of civilization. Its mass, rationalized, chronic presence has increased as civilization has spread and deepened. Among the specific reasons it doesn't go away is the desire to escape the horror of mass-industrial life. Mass society of course finds its reflection in mass soldiery and it has been this way from early civilization. In the age of hyper-developing technology, war is fed by new heights of dissociation and disembodiment. We are ever further from a grounding or leverage from which to oppose it (while too many accept paltry, symbolic "protest" gestures).

How did it come to be that war is "the proper work of man," in the words of Homer's Odysseus? We know that organized warfare advanced with early industry and complex social organization in general, but the question of origins predates even Homer's early Iron Age. The explicit archaeological/anthropological literature on the subject is surprisingly slight.

Civilization has always had a basic interest in holding its subjects captive by touting the necessity of official armed force. It is a prime ideological claim that without the state's monopoly on violence, we would be unprotected and insecure. After all, according to Hobbes, the human condition has been and will always be that of "a war of all against all." Modern voices, too, have argued that humans are innately aggressive and violent, and so need to be constrained by armed authority. Raymond Dart (e.g. *Adventures with the Missing Link*, 1959), Robert Ardrey (e.g. *African Genesis*, 1961), and Konrad Lorenz (e.g. *On Aggression*, 1966) are among the best known, but the evidence they put forth has been very largely discredited.

In the second half of the 20th century, this pessimistic view of human nature began to shift. Based on archaeological evidence, it is now a tenet of mainstream scholarship that pre-civilization humans lived in the absence of violence—more specifically, of organized violence. Eibl-Eibesfeldt referred to the !Ko-Bushmen as not bellicose: "Their cultural ideal is peaceful coexistence, and they achieve this by avoiding conflict, that is by splitting up, and by emphasizing and encouraging the numerous patterns of bonding."[1] An earlier judgment by W.J. Perry

is generally accurate, if somewhat idealized: "Warfare, immorality, vice, polygyny, slavery, and the subjection of women seem to be absent among our gatherer-hunter ancestors."[2]

The current literature consistently reports that until the final stages of the Paleolithic Age—until just prior to the present 10,000-year era of domestication—there is no conclusive evidence that any tools or hunting weapons were used against humans at all.[3] "Depictions of battle scenes, skirmishes and hand-to-hand combat are rare in hunter-gatherer art and when they do occur most often result from contact with agriculturalists or industrialized invaders," concludes Taçon and Chippindale's study of Australian rock art.[4] When conflict began to emerge, encounters rarely lasted more than half an hour, and if a death occurred both parties would retire at once.[5]

The record of Native Americans in California is similar. Kroeber reported that their fighting was "notably bloodless. They even went so far as to take poorer arrows to war than they used in economic hunting."[6] Wintu people of Northern California called off hostilities once someone was injured.[7] "Most Californians were absolutely nonmilitary; they possessed next to none of the traits requisite for the military horizon, a condition that would have taxed their all but nonexistent social organization too much. Their societies made no provision for collective political action," in the view of Turney-High.[8] Lorna Marshall described Kung! Bushmen as celebrating no valiant heroes or tales of battle. One of them remarked, "Fighting is very dangerous; someone might get killed."[9] George Bird Grinnell's "Coup and Scalp Among the Plains Indians"[10] argues that counting coup (striking or touching an enemy with the hand or a small stick) was the highest point of (essentially nonviolent) bravery, whereas scalping was not valued.

The emergence of institutionalized warfare appears to be associated with domestication, and/or a drastic change in a society's physical situation. As Glassman puts it, this comes about "only where band peoples have been drawn into the warfare of horticulturalists or herders, or driven into an ever-diminishing territory."[11] The first reliable archaeological evidence of warfare is that of fortified, pre-Biblical Jericho, c. 7500 B.C. In the early Neolithic a relatively sudden shift happened. What dynamic forces may have led people to adopt war as a social institution? To date, this question has not been explored in any depth.

Symbolic culture appears to have emerged in the Upper Paleolithic; by the Neolithic it was firmly established in human cultures everywhere. The symbolic has a way of effacing particularity, reducing human presence in its specific, non-mediated aspects. It is easier to direct violence against a faceless enemy who represents some officially defined

evil or threat. Ritual is the earliest known form of purposive symbolic activity: symbolism acting in the world. Archaeological evidence suggests that there may be a link between ritual and the emergence of organized warfare.

During the almost timeless era when humans were not interested in dominating their surroundings, certain places were special and came to be known as sacred sites. This was based on a spiritual and emotional kinship with the land, expressed in various forms of totemism or custodianship. Ritual begins to appear, but is not central to band or forager societies. Emma Blake observes, "Although the peoples of the Paleolithic practiced rituals, the richest material residues date from the Neolithic period onward, when sedentism and the domestication of plants and animals brought changes to the outlook and cosmology of people everywhere."[12] It was in the Upper Paleolithic that certain strains and tensions caused by the development of specialization first became evident. Inequities can be measured by such evidence as differing amounts of goods at hearth sites in encampments; in response, ritual appears to have begun to play a greater social role. As many have noted, ritual in this context is a way of addressing deficiencies of cohesion or solidarity; it is a means of guaranteeing a social order that has become problematic. As Bruce Knauft saw, "ritual reinforces and puts beyond argument or question certain highly general propositions about the spiritual and human world…[and] predisposes deep-seated cognitive acceptance and behavioral compliance with these cosmological propositions."[13] Ritual thus provides the original ideological glue for societies now in need of such legitimating assistance. Face-to-face solutions become ineffective as social solutions, when communities become complex and already partly stratified. The symbolic is a non-solution; in fact, it is a type of enforcer of relationships and world-views characterized by inequality and estrangement.

Ritual is itself a type of power, an early, pre-state form of politics. Among the Maring people of Papua New Guinea, for instance, the conventions of the ritual cycle specify duties or roles in the absence of explicitly political authorities. Sanctity is therefore a functional alternative to politics; sacred conventions, in effect, govern society.[14] Ritualization is clearly an early strategic arena for the incorporation of power relations. Further, warfare can be a sacred undertaking, with militarism promoted ritually, blessing emergent social hierarchy.

René Girard proposes that rituals of sacrifice are a necessary counter to endemic aggression and violence in society.[15] Something nearer to the reverse is more the case: ritual legitimates and enacts violence. As Lienhardt said of the Dinka herders of Africa, to "make a feast or sacrifice often implies war."[16] Ritual does not substitute for war,

according to Arkush and Stanish: "warfare in all times and places has ritual elements."[17] They see the dichotomy between "ritual battle" and "real war" to be false, summarizing that "archaeologists can expect destructive warfare and ritual to go hand in hand."[18]

It is not only that among Apache groups, for example, that the most ritualized were the most agricultural,[19] but that so often ritual has mainly to do with agriculture and warfare, which are often very closely linked.[20] It is not uncommon to find warfare itself seen as a means of enhancing the fertility of cultivated ground. Ritual regulation of production and belligerence means that domestication has become the decisive factor. "The emergence of systematic warfare, fortifications, and weapons of destruction," says Hassan, "follows the path of agriculture."[21]

Ritual evolves into religious systems, the gods come forth, sacrifice is demanded. "There is no doubt that all the inhabitants of the unseen world are greatly interested in human agriculture," notes anthropologist Verrier Elwin.[22] Sacrifice is an excess of domestication, involving domesticated animals and occurring only in agricultural societies. Ritual killing, including human sacrifice, is unknown in non-domesticated cultures.[23]

Corn in the Americas tells a parallel story. An abrupt increase in corn agriculture brought with it the rapid elaboration of hierarchy and militarization in large parts of both continents.[24] One instance among many is the northward intrusion of the Hohokams against the indigenous Ootams[25] of southern Arizona, introducing agriculture and organized warfare. By about 1000 A.D. the farming of maize had become dominant throughout the Southwest, complete with year-round ritual observances, priesthoods, social conformity, human sacrifice, and cannibalism.[26] It is hardly an understatement to say, with Kroeber, that with maize agriculture, "all cultural values shifted."[27]

Horses are another instance of the close connection between domestication and war. First domesticated in the Ukraine around 3000 B.C., their objectification fed militarism directly. Almost from the very beginning they served as machines; most importantly, as war machines.[28]

The relatively harmless kinds of intergroup fighting described above gave way to systematic killing as domestication led to increasing competition for land.[29] The drive for fresh land to be exploited is widely accepted as the leading specific cause of war throughout the course of civilization. Once-dominant feelings of gratitude toward a freely giving nature and knowledge of the crucial interdependence of all life are replaced by the ethos of domestication: humans versus the natural world. This enduring power struggle is the template for the wars it constantly engenders. There was awareness of the price exacted by the

paradigm of control, as seen in the widespread practice of symbolic regulation or amelioration of domestication of animals in the early Neolithic. But such gestures do not alter the fundamental dynamic at work, any more than they preserve millions of years' worth of gatherer-hunters' practices that balanced population and subsistence.

Agricultural intensification meant more warfare. Submission to this pattern requires that all aspects of society form an integrated whole from which there is little or no escape. With domestication, division of labor now produces full-time specialists in coercion: for example, definitive evidence shows a soldier class established in the Near East by by 4500 B.C. The Jivaro of Amazonia, for millennia a harmonious component of the biotic community, adopted domestication, and "have elaborated blood revenge and warfare to a point where these activities set the tone for the whole society."[30] Organized violence becomes pervasive, mandatory, and normative.

Expressions of power are the essence of civilization, with its core principle of patriarchal rule. It may be that systematic male dominance is a by-product of war. The ritual subordination and devaluation of women is certainly advanced by warrior ideology, which increasingly emphasized "male" activities and downplayed women's roles.

The initiation of boys is a ritual designed to produce a certain type of man, an outcome that is not at all guaranteed by mere biological growth. When group cohesion can no longer be taken for granted, symbolic institutions are required—especially to further compliance with pursuits such as warfare. Lemmonier's judgment is that "male initiations…are connected by their very essence with war."[31]

Polygyny, the practice of one man taking multiple wives, is rare in gatherer-hunter bands, but is the norm for war-making village societies.[32] Once again, domestication is the decisive factor. It is no coincidence that circumcision rituals by the Merida people of Madagascar culminated in aggressive military parades.[33] There have been instances where women not only hunt but also go into combat (e.g. the Amazons of Dahomey; certain groups in Borneo), but it is clear that gender construction has tended toward a masculinist, militarist direction. With state formation, warriorship was a common requirement of citizenship, excluding women from political life.

War is not only ritualistic, usually with many ceremonial features; it is also a very formalized practice. Like ritual itself, war is performed via strictly prescribed movements, gestures, dress, and forms of speech. Soldiers are identical and structured in a standardized display. The formations of organized violence, with their columns and lines, are like agriculture and its rows: files on a grid.[34] Control and discipline are thus served, returning to the theme of ritualized behavior, which is always an

increased elaboration of authority.

Exchange between bands in the Paleolithic functioned less as trade (in the economic sense) than as exchange of information. Periodic intergroup gatherings offered marriage opportunities, and insured against resource shortfalls. There was no clear differentiation of social and economic spheres. Similarly, to apply our word "work" is misleading in the absence of production or commodities. While territoriality was part of forager-hunter activity, there is no evidence that it led to war.[35]

Domestication erects the rigid boundaries of surplus and private property, with concomitant possessiveness, enmity, and struggle for ownership. Even conscious mechanisms aimed at mitigating the new realities cannot remove their ever-present, dynamic force. In *The Gift*, Mauss portrayed exchange as peacefully resolved war, and war as the result of unsuccessful transactions; he saw the potlatch as a sort of sublimated warfare.[36]

Before domestication, boundaries were fluid. The freedom to leave one band for another was an integral part of forager life. The more or less forced integration demanded by complex societies provided a staging ground conducive to organized violence. IN some places, chiefdoms arose from the suppression of smaller communities' independence. Proto-political centralization was at times pushed forward in the Americas by tribes desperately trying to confederate to fight European invaders.

Ancient civilizations spread as a result of war, and it can be said that warfare is both a cause of statehood, and its result.

Not much has changed since war was first instituted, rooted in ritual and given full-growth potential by domestication. Marshall Sahlins first pointed out that increased work follows developments in symbolic culture. It's also the case that culture begets war, despite claims to the contrary. After all, the impersonal character of civilization grows with the ascendance of the symbolic. Symbols (e.g. national flags) allow our species to dehumanize our fellow-humans, thus enabling systematic intra-species carnage.

ENDNOTES

1. I Eibl-Eibesfelt, "Aggression in the !Ko-Bushmen," in Martin A. Nettleship, eds., *War, its Causes and Correlates* (The Hague: Mouton, 1975), p. 293.
2. W.J. Perry, "The Golden Age," in *The Hibbert Journal* XVI (1917), p. 44.
3. Arthur Ferrill, *The Origins of War from the Stone Age to Alexander the Great* (New York: Thames and Hudson, 1985), p. 16.
4. Paul Taçon and Christopher Chippindale, "Australia's Ancient Warriors: Changing Depictions of Fighting in the Rock Art of Arnhem Land, N.T.," *Cambridge*

Archaeological Journal 4:2 (1994), p. 211.
5. Maurice R. Davie, *The Evolution of War: A Study of Its Role in Early Societies* (New Haven: Yale University Press, 1929), p. 247.
6. A.L. Kroeber, *Handbook of the Indians of California: Bulletin 78* (Washington, D.C.: Bureau of American Ethnology, 1923), p. 152.
7. Christopher Chase-Dunn and Kelly M. Man, *The Wintu and their Neighbors* (Tucson: University of Arizona Press, 1998), p. 101.
8. Harry Holbert Turney-High, *Primitive War: Its Practice and Concepts* (Columbia: University of South Carolina Press, 1949), p. 229.
9. Lorna Marshall, "Kung! Bushman Bands," in Ronald Cohen and John Middleton, eds., *Comparative Political Systems* (Garden City: Natural History Press, 1967), p. 17.
10. George Bird Grinnell, "Coup and Scalp among the Plains Indians," *American Anthropologist* 12 (1910), pp. 296-310. John Stands in Timber and Margot Liberty make the same point in their *Cheyenne Memories* (New Haven: Yale University Press, 1967), pp. 61-69. Also, Turney-High, *op. cit*., pp. 147, 186.
11. Ronald R. Glassman, *Democracy and Despotism in Primitive Societies, Volume One* (Millwood, New York: Associated Faculty Press, 1986), p. 111.
12. Emma Blake, "The Material Expression of Cult, Ritual, and Feasting," in Emma Blake and A. Bernard Knapp, eds., *The Archaeology of Mediterranean Prehistory* (New York: Blackwell, 2005), p. 109.
13. Bruce M. Knauft, "Culture and Cooperation in Human Evolution," in Leslie Sponsel and Thomas Gregor, eds., *The Anthropology of Peace and Nonviolence* (Boulder: L. Rienner, 1994), p. 45.
14. Roy A. Rappaport, *Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People* (New Haven: Yale University Press, 1967), pp. 236-237.
15. René Girard, *Violence and the Sacred*, translated by Patrick Gregory (Baltimore: Johns Hopkins University Press, 1977). Like Ardrey and Lorenz, Girard starts from the absurd view that all social life is steeped in violence.
16. G. Lienhardt, *Divinity and Experience: The Religion of the Dinka* (Oxford: Oxford University Press, 1961), p. 281.
17. Elizabeth Arkush and Charles Stanish, "Interpreting Conflict in the Ancient Andes: Implications for the Archaeology of Warfare," *Current Anthropology* 46:1 (February 2005), p. 16.
18. *Ibid*., p. 14.
19. James L. Haley, *Apaches: A History and Culture Portrait* (Garden City, NY: Doubleday, 1981), pp. 95-96.
20. Rappaport, *op.cit*, p. 234, for example.
21. Quoted by Robert Kuhlken, "Warfare and Intensive Agriculture in Fiji," in Chris Gosden and Jon Hather, eds., *The Prehistory of Food: Appetites for Change* (New York: Routledge, 1999), p. 271. Works such as Lawrence H. Keeley, *War Before Civilization* (New York: Oxford University Press, 1996) and Pierre Clastres, *Archaeology of Violence* (New York: Semiotext(e), 1994), and Jean Guilaine and Jean Zammit, *The Origins of War: Violence in Prehistory* (Malden, MA: Blackwell, 2005) somehow manage to overlook this point.
22. Verrier Elwin, *The Religion of an Indian Tribe* (London: Oxford University Press, 1955, p. 300.
23. Jonathan Z. Smith, "The Domestication of Sacrifice," in Robert G. Hamerton-Kelly, ed., *Violent Origins* (Stanford: Stanford University Press, 1987), pp. 197, 202.
24. Christine A. Hastorf and Sissel Johannessen, "Becoming Corn-Eaters in Prehistoric America," in Johannessen and Hastorf, eds., *Corn and Culture in the*

Prehistoric New World (Boulder: Westview Press, 1994), especially pp. 428-433.
25. Charles Di Peso, *The Upper Pima of San Cayetano de Tumacacori* (Dragoon, AZ: Amerind Foundation, 1956), pp. 19, 104, 252, 260.
26. Christy G. Turner II and Jacqueline A. Turner, *Man Corn: Cannibalism and Violence in the Prehistoric American Southwest* (Salt Lake City: University of Utah Press, 1999), pp. 3, 460, 484.
27. A.L. Kroeber, *Cultural and Natural Areas of Native North America* (Berkeley: University of California Press, 1963), p. 224.
28. Harold B. Barclay, *The Role of the Horse in Man's Culture* (London: J.A. Allen, 1980), e.g. p. 23.
29. Richard W. Howell, "War Without Conflict," in Nettleship, *op.cit*., pp. 683-684.
30. Betty J. Meggers, *Amazonia: Man and Culture in Counterfeit Paradise* (Chicago: Aldine Atherton, 1971), pp. 108, 158.
31. Pierre Lemmonier, "Pigs as Ordinary Wealth," in Pierre Lemonnier, ed., *Technological Choices: Transformation in Material Cultures since the Neolithic* (London: Routledge, 1993), p. 132.
32. Knauft, *op.cit*., p. 50. Marvin Harris, *Cannibals and Kings* (New York: Random House, 1977), p. 39.
33. Maurice Bloch, *Prey into Hunter: The Politics of Religious Experience* (Cambridge: Cambridge University Press, 1992), p. 88.
34. The "rank-and-file" of organized labor is another product of these originals.
35. Robert L. Carneiro, "War and Peace," in S.P. Reyna and R.E. Downs, eds., *Studying War: Anthropological Perspectives* (Langhorn, PA: Gordon and Breach, 1994), p. 12.
36. Cited and discussed in Marshall Sahlins, *Stone Age Economics* (Chicago: Aldine, 19720, pp. 174, 182.

THE IRON GRIP OF CIVILIZATION: THE AXIAL AGE

Civilization is control and very largely a process of the extension of control. This dynamic exists on multiple levels and has produced a few key transition points of fundamental importance.

The Neolithic Revolution of domestication, which established civilization, involved a reorientation of the human mentality. Jacques Cauvin called this level of the initiation of social control "a sort of revolution of symbolism."[1] But this victory of domination proved to be incomplete, its foundations in need of some further shoring up and restructuring. The first major civilizations and empires, in Egypt, China, and Mesopotamia, remained grounded in the consciousness of tribal cultures. Domestication had certainly prevailed––without it, no civilization exists––but the newly dominant perspectives were still intimately related to natural and cosmological cycles. Their total symbolic expressiveness was not yet fully commensurate with the demands of the Iron Age, in the first millennium B.C.

Karl Jaspers identified a turning point for human resymbolization, the "Axial Age",[2] as having occurred between 800 and 200 B.C. in the three major realms of civilization: the Near East (including Greece), India, and China. Jaspers singled out such sixth century prophets and spiritual figures as Zoroaster in Persia, Deutero-Isaiah among the Hebrews, Heraclitus and Pythagoras in Greece, the Buddha in India, and Confucius in China. These individuals simultaneously––but independently––made indelible contributions to post-Neolithic consciousness and to the birth of the world religions.[3] In astonishingly parallel developments, a decisive change was wrought by which civilization established a deeper hold on the human spirit, world-wide.

Internal developments within each of these respective societies broke the relative quiescence of earlier Bronze Age cultures. Wrenching change and new demands on the original patterns were in evidence in many regions. The world's urban population, for example, nearly doubled in the years 600 to 450 B.C.[4] A universal transformation

was needed––and effected––providing the "spiritual foundations of humanity" that are still with us today.[5] The individual was fast becoming dwarfed by civilization's quickening Iron Age pace. The accelerating work of domestication demanded a recalibration of consciousness, as human scale and wholeness were left behind. Whereas in the earlier Mesopotamian civilizations, for example, deities were more closely identified with various forces of nature, now society at large grew more differentiated and the separation deepened between the natural and the supernatural. Natural processes were still present, of course, but increasing social and economic tensions strained their integrity as wellsprings of meaning.

The Neolithic era––and even the Bronze Age––had not seen the complete overturning of a nature-culture equilibrium. Before the Axial Age, objects were described linguistically in terms of their activities. Beginning with the Axial Age, the stress is on the static qualities of objects, omitting references to organic processes. In other words, a reification took place, in which outlooks (e.g. ethics) turned away from situation-related discourse to a more abstract, out-of-context orientation. In Henry Bamford Parkes' phrase, the new faiths affirmed "a human rather than a tribalistic view of life."[6]

The whole heritage of sacred places, tribal polytheism, and reverence for the earth-centered was broken, its rituals and sacrifices suddenly out of date. Synonymous with the rise of "higher" civilizations and world religions, a sense of system appeared, and the need for codification became predominant.[7] In the words of Spengler: "the whole world a dynamic system, exact, mathematically disposed, capable down to its first causes of being experimentally probed and numerically fixed so that man can dominate it...."[8] A common aspect of the new reformulation was the ascendance of the single universal deity, who required moral perfection rather than the earlier ceremonies. Increased control of nature and society was bound to evolve toward increased inner control.

Pre-Axial, "animistic" humanity was sustained not only by a less totalizing repression, but also by a surviving sense of union with natural reality. The new religions tended to sever bonds with the manifold, profane world, placing closure on it over and against the supernatural and unnatural.

This involved (and still involves) what Mircea Eliade called "cosmicizing," the passage from a situational, conditional plane to an "unconditioned mode of being."[9] A Buddhist image represents "breaking through the roof"; that is, transcending the mundane realm and entering a trans-human reality.[10] The new, typically monotheistic religions clearly viewed this transcendance as a unity, beyond any particularity of existence. Superpersonal authority or agency, "the most culturally

recurrent, cognitively relevant, and evolutionarily compelling concept in religion",[11] was needed to cope with the growing inability of political and religious authority to adequately contain Iron Age disaffection.

A direct, personal relationship with ultimate spiritual reality was a phenomenon that testified to the breakdown of community. The development of individual religious identity, as distinct from one's place in the tribe and in the natural world, was characteristic of Axial consciousness. The personalizing of a spiritual journey and a distancing from the earth shaped human societies in turn. These innovations denied and suppressed indigenous traditions, while fostering the implicit illusion of escaping civilization. Inner transformation and its "way up" was spirit divorced from body, nirvana separate from samsara. Yogic withdrawal, life-denying asceticism, etc. were deeply dualistic, almost without exception.

All this was taking place in the context of an unprecedented level of rationalization and control of daily life in many places, especially by about 500 B.C. S.N. Eisenstadt referred to a resultant "rebellion against the constraints of division of labor, authority, hierarchy, and… the structuring of the time dimension…."[12] The Axial religions formed during a period of social disintegration, when long-standing sources of satisfaction and security were being undermined, and the earlier relative autonomy of tribes and villages was breaking down. The overall outcomes were a great strengthening of technological systems, and an almost simultaneous rise of mighty empires in China (Tsin Shi hwang-ti), India (Maurya dynasty), and the West (the Hellenistic empires and, slightly later, the *Imperium Romanum*).

Domestication/civilization set this trajectory in motion by its very nature, giving birth to technology as domination of nature, and systems based on division of labor. There was mining before 3000 B.C. in Sinai (early Bronze Age), and a surge in the progress of metallurgical technology during the third millennium. These innovations coincided with the emergence of true states, and with the invention of writing. Naming the stages of cultural development by reference to metals is apt testimony to their central role. Metallurgy has long stimulated all other productive activities. By 800 B.C. at the latest, the Iron Age had fully arrived in the West, with mass production of standardized goods.

Massification of society tended to become the norm, based on specialization. For example, Bronze Age smiths had prospected, mined, and smelted the ores and then worked and alloyed the metals. Gradually, each of these processes became the purview of corresponding specialists, eroding autonomy and self-sufficiency. With respect to pottery, a common domestic skill was taken over by professionals.[13] Bread now came more often from bakeries than from the household. It

is no accident that the Iron Age and the Axial Age commence at almost exactly the same time, c. 800 B.C. The turbulence and upheavals in the actual world find new consolations and compensations in the spiritual realm––new symbolic forms for further fractioning societies.[14]

In Homer's *Odyssey* (8th century B.C.), the technologically backward Cyclops have surprisingly easy lives compared to people in Iron Age Greece of that time, when the beginnings of a factory system were already in place. Development of steel plows and weapons accelerated the destruction of nature (erosion, deforestation, etc.) and ruinous warfare.

In Persia, oil was already being refined, if not drilled. There the seer Zoroaster (aka Zarathustra) emerged, providing such potent concepts as immortality, the Last Judgment, and the Holy Spirit (which were quickly incorporated into Judaism). The dualism of the divine Ahura Mazda's struggle against evil was paramount theologically, in a religious system intimately tied to the needs of the state. In fact, the Persian legal system of the Achaemenian period (558-350 B.C.) was virtually synonymous with Zoraoastrianism, and the latter in fact quickly became the state religion. According to Harle, Zoroastrianism was "born to serve the demand for social order in a rapidly changing and expanding society."[15]

Zoroastrian monotheism was not only a definitive turning away from animism and the old gods, but also a marked elevation of the categories of good and evil as universals and ruling concepts. Both of these characteristics were Axial Age essentials. Spengler regarded Zarathustra as a "traveling companion of the prophets of Israel", who also steered popular belief away from the web of pantheistic, localist, nature-oriented rites and outlooks.[16]

The Hebrew-Judaic tradition was undergoing a similar change, especially during the same sixth century heart of the Axial Age. The eastern Mediterranean, and Israel in particular, was experiencing a surge of Iron Age urbanization. The social order was under considerable strain in the context of a national need for identity and coherence, especially in the face of more powerful, empire-building neighbors. The Israelites spent two-thirds of the sixth century as captives of the Babylonians.

Yahweh rose from local fertility god to monotheist status in a manner commensurate with the requirements of a beleaguered and threatened people. His grandeur, and the universality of his field of relevance, paralleled the Hebrews' desire for strength in a hostile world.[17] In the eighth century B.C., Amos had announced this vision as a de-ritualizing, transcendentalizing spiritual direction. Jewish uniqueness thus unfolded against the backdrop of radical, unitary divinity.

The "new man" of Ezekiel (early sixth century B.C.) was part of a new

supernatural dimension that, again, took its bearings from an unstable time. As Jacob Neusner pointed out, by the sixth century B.C.––at the very latest––the economy was no longer grounded in subsistence or self-sufficiency.[18] The role of the household had been greatly diminished by division of labor and the massifying market. An omnipotent god demanding absolute submission reflected rulers' aspirations for top-down, stabilizing authority. Yahweh, like Zeus, was originally a nature god, albeit connected to domestication. His rule came to hold sway over the moral and civic order, anchored by the rule of kings. The positive, redemptive role of suffering emerged here, unsurprisingly, along with refined political domination. Deutero-Isaiah (Second Isaiah), greatest of the Hebrew prophets of the Axial Age, created a royal ideology in the sixth century B.C.[19] He announced that the very essence of the Covenant with God was embodied in the king himself––that the king *was* the Covenant.[20] The force of this announcement derived from universal cosmic law, beyond any sense perception or earthly parallel; natural phenomena were only its expressions, wrought in an infinity unknowable by mortals.

In pre-Socratic Greece, especially by the time of Pythagoras and Heraclitus in the sixth century B.C., tribal communities were facing disintegration, while new collectivities and institutional complexes were under construction. The silver mines of Laurium were being worked by thousands of slaves. An "advanced manufacturing technology"[21] in large urban workshops often displayed a high degree of division of labor. "Pottery in Athens was made in factories which might employ, under the master-potter, as many as seventy men."[22] Strikes and slave uprisings were not uncommon,[23] while home industries and small-scale cultivators struggled to compete against the new massification. Social frictions found expression, as always, in competing world views.

Hesiod (8th century B.C.) belonged to a tradition of Golden Age proponents, who celebrated an original, uncorrupted humanity. They saw in the Iron Age a further debasing movement away from those origins. Xenophanes (6th century), to the contrary, unequivocally proclaimed that newer was better, echoing Jewish prophets of the Axial Age who had contributed significantly to progressive thinking. He went so far as to see in the forward movement of civilization the origin of all values, glorying in urbanization and increasingly complex technological systems.[24] Xenophanes was the first to proclaim belief in progress.[25] Although the Cynics held out in favor of an earlier vitality and independence, the new creed gained ground. The Sophists upheld its standards, and after 500 B.C., widespread embrace of higher civilization swamped the earlier longing for a primordial, unalienated world.

The transcendentalizing foundation for this shift can be read in an

accelerating distancing of people from the land that had been taking place on multiple levels. A land-based pluralism of small producers, with polytheistic attachments to local custom, was transformed by urban growth and stratification, and the detached perspective that suits them. Plato's *Republic* (c. 400 B.C.) is a chilling, disembodied artifact of the rising tendency toward transformation of thought and society along standardized, isolating lines. This model of society was a contrived imposition of the new authoritarianism, utterly removed from the surviving richness that civilization had thus far continued to coexist with.

Social existence intruded to the furthest reaches of consciousness, and the two schema, Iron Age and Axial Age, also overlapped and interacted in India. The period from 1000 to 600 B.C. marked the early Iron Age transition from a socio-economic-cultural mode that was tribal/pastoral, to that of settled/agrarian. The reign of surplus and sedentism was greatly hastened and extended by full-fledged iron and steel plow-based cultivation. Mines and early factories in India also centered on iron technology, and helped push forward the homogenization of cultures in the Mauryan state of this period. New surges of domestication (e.g. horses), urbanization, large estates, and wage labor took place in the Ganges valley, as "tribal egalitarianism," in Romila Thapar's words, surrendered to the newly evolving system by 500 B.C.[26]

This was also roughly the time of Gautama Buddha. Buddhism's origins and role with respect to the spread of Iron Age society can readily be traced.[27] Canonical scriptures refer to early Buddhist teachers as consultants to the rulers of Indian states, a testimony to Buddhism's direct usefulness to the new urban order in a time of great flux. Various commentators have seen the Buddhist reformulation of the premises of Hinduism as an ideology that originated to serve the needs of a challenged, emerging structure.[28] The early supporters, it is clear, were largely members of the urban and rural elites.[29]

For the Buddha––and for the other Axial prophets in general––the personal took precedence over the social. He was the detached observer, seeking freedom from the world, who mainly accepted a very narrow sphere as locus of attention and responsibility. This amounts to a fatalism that founded Buddhism upon suffering as a prime fact, a condition of life that must be accepted. The message of *dukkha* (suffering) expresses the ultimate incapacity of the human condition to include happiness.

Yet Buddhism promised a way out of social dislocation and malaise[30], through its focus on individual salvation. The goal is "extinguishedness" or Nirvana, the suppression of interest in the world by those disenchanted with it. Similarly, Buddha's presentation of the "cosmic

process" was stripped of all earthly processes, human and non-human. While criticizing the caste system and hereditary priesthoods, he took no active role in opposing them. Buddhism was highly adaptive regarding changing social situations, and so was useful to the ruling classes.

Buddhism became another world religion, with global outreach and distinctive superhuman beings to whom prayers are directed. By around 250 B.C. Buddha had become the familiar seated god-figure and Buddhism the official religion of India, as decreed by Asoka, last of the Mauryan dynasty.

The Iron Age came to China slightly later than to India; industrial production of cast iron was widespread by the 4th century B.C. Earlier, Bronze Age polytheism resembled that found elsewhere, complete with a variety of spirits, nature and fertility festivals, etc., corresponding to less specialized, smaller-scale modes of livelihood. The Zhou dynasty had been gradually falling apart since the 8th century; continuous wars and power struggles intensified into the period of the Warring States (482-221 B.C.). Thus the indigenous spiritual traditions, including shamanism and local nature cults, were overtaken by a context of severe technological and political change.

Taoism was a part of this age of upheaval, offering a path of detachment and otherworldliness, while preserving strands of animist spiritual tradition. In fact, early Taoism was an activist religion, with some of its "legendary rebels" engaged in resistance to the new stratifying trends, in favor of re-establishing a class-less Golden Age.[31]

The primitivist theme is evident in the *Chuang Tzu* and survives in the *Tao Te Ching*, key text of Taoism's most prominent voice, Lao-tse (6th century B.C.). An emphasis on simplicity and an anti-state outlook put Taoism on a collision course with the demands of higher civilization in China. Once again, the 500s B.C. were a pivotal time frame, and the opposed messages of Lao-tse and Confucius were typical of Axis Age alternatives.

In contast to Lao-tse, his virtual opposite, Confucius (557-479 B.C.), embraced the state and the New World Order. Instead of a longing for the virtuous time of the "noble savage", before class divisions and division of labor, the Confucian doctrine combined cultural progressivism with the abandonment of connections with nature. No ban was placed on the gods of mountains and winds, ancestral spirits, and the like; but they were no longer judged to be central, or even important.

Confucianism was an explicit adjustment to the new realities, aligning itself with power in a more hands-on, less transcendent way than some other Axial Age spiritualisms. For Confucius, transcendence was mainly

inward; he stressed an ethical stringency in service to authority. In this way, a further civilizational colonization was effected, at the level of the individual personality. Internalization of a rigid ruling edifice, minus theology but disciplined by an elaborate code of behavior, was the Confucian way that reigned in China for two thousand years.

These extremely cursory snapshots of Axial Age societies may serve to at least introduce some context to Jaspers' formulation of a global spiritual "breakthrough". The mounting conflict between culture and nature, the growing tensions in human existence, were resolved in favor of civilization, bringing it to a new level of domination. The yoke of domestication was modernized and fitted anew, more tightly than before. The spiritual realm was decisively circumscribed, with earlier, earth-based creeds rendered obsolete. Civilization's original victory over freedom and health was renewed and expanded, with so much sacrificed in the updating process.

The whole ground of spiritual practice was altered to fit the new requirements of mass civilization. The Axial Age religions offered "salvation", at the price of freedom, self-sufficiency, and much of what was left of face-to-face community. Under the old order, the authorities had to use coercion and bribery to control their subjects. Henceforth they could operate more freely within the conquered terrain of service and worship.

The gods were created, in the first place, out of the deepest longings of people who were being steadily deprived of their own authentic powers and autonomy. But even though the way out of progressive debasement was barred by the Axial Age shift, civilization has never been wholeheartedly accepted; and most people have never wholly identified with the "spiritualized" self. How could these ideas be fully embraced, predicated as they were on a mammoth defeat? For Spengler, the Axial Age people who took up these new religions were "tired megalopolitans".[32] Today's faithful, too, may be tired megalopolitans–– all too often still spellbound, after all these years, by ideologies of sacrifice, suffering, and redemption.

The renunciations have been legion. Buddhism was founded, for example, by a man who abandoned his wife and newborn child as obstacles to his spiritual progress. Jesus, a few centuries later, exhorted his followers to make similar "sacrifices".

Today's reality of unfolding disaster has a lot to do with the relationship between religion and politics—and more fundamentally, with accepting civilization's trajectory as inevitable. It was the sense of the "unavoidable" that drove people of the sixth century B.C. to the false solutions of Axial Age religiosity; today, our sense of inevitability renders people helpless in the face of ruin, on all fronts. 2500 years is

long enough for us to have learned that escape from community, and from the earth, is not a solution, but a root cause of our troubles.

Authentic spirituality is so importantly a function of our connection with the earth. To reclaim the former, we must regain the latter. That so very much stands in our way is the measure of how bereft we have become. Do we have the imagination, strength, and determination to recover the wholeness that was once our human birthright?

ENDNOTES

1. Jacques Cauvin, *The Birth of the Gods and the Origins of Agriculture* (Cambridge: Cambridge University Press, 2000), p.2.
2. Karl Jaspers, *The Origin and Goal of History* (New Haven: Yale University Press, 1953), especially the first 25 pages.
3. Christianity and Islam may be properly considered later spin-offs of this Axial period, their own natures already established some centuries earlier.
4. Andrew Bosworth, "World Cities and World Economic Cycles," in *Civilizations and World Systems*, ed. Stephan K. Sanderson (Walnut Creek, CA: AltaMira Press, 1995), p. 214.
5. Karl Jaspers, *Way to Wisdom* (New Haven: Yale University Press, 2003 [1951]), pp 98-99.
6. Henry Bamford Parkes, *Gods and Men: The Origins of Western Culture* (New York: Vintage Books, 1965), p. 77.
7. John Plott, *Global History of Philosophy*, vol. I (Delhi: Motilal Manarsidass, 1963), p. 8.
8. Oswald Spengler, *The Decline of the West*, vol. II (New York: Alfred A. Knopf, 1928), p. 309
9. Mircea Eliade, "Structures and Changes in the History of Religions," in *City Invincible*, eds. Carl H. Kraeling and Robert M. Adams (Chicago: University of Chicago Press, 1958), p. 365.
10. *Ibid*., pp 365-366. Karl Barth's leap into "the upper story of faith" has a similar sense; quoted in Seyyed Hossein Nasr, *Knowledge and the Sacred* (Albany: State University of New York, 1989), p. 48.
11. Scott Atran, *In Gods We Trust: the Evolutionary Landscape of Religion* (New York: Oxford University Press, 2002), p. 57.
12. S.N. Eisenstadt, "The Axial Age Breakthroughs," *Daedalus* 104 (1975), p. 13. "May the gods destroy that man who first discovered hours and who first set up a sundial here." ––Plautus, 3rd century B.C. Eisenstadt's is the best essay on the overall topic that I have found.
13. The fate of domestic hand-loom weavers almost three millennia later comes to mind; the independent weaver household was overwhelmed by the factory system of the Industrial Revolution.
14. It is a striking irony that Nietzsche named his archetypal "beyond good and evil" figure Zarathustra.
15. Vilho Harle, *Ideas of Social Order in the Ancient World* (Westport, CT: Greenwood Press, 1998), p. 18.
16. Spengler, *op. cit*., pp 168, 205.

17. V. Nikiprowetzky, "Ethical Monotheism," *Daedalus* 104 (1975), pp 80-81.
18. Jacob Neusner, *The Social Studies of Judaism: Essays and Reflections*, vol. 1 (Atlanta: Scholars Press, 1985), p. 71.
19. Paolo Sacchi, *The History of the Second Temple Period* (Sheffield: Sheffield Academic Press Ltd., 2000), p. 87.
20. *Ibid*., pp 99-100.
21. Frederick Klemm, *A History of Western Technology* (New York: Charles Scribners Sons, 1959), p. 28.
22. Charles Singer, E.J. Holmyard and A.R. Hall, eds., *A History of Technology*, vol. I (Oxford: Clarendon Press, 1954), p. 408.
23. C. Osborne Ward, *The Ancient Lowly*, vol. I (Chicago: Charles Kerr, 1888), Chapter V.
24. Ludwig Edelstein, *The Idea of Progress in Classical Antiquity* (Baltimore: Johns Hopkins University Press, 1967), pp 15-16.
25. *Ibid*., p. 3.
26. Romila Thapar, "Ethics, Religion, and Social Protest in India," *Daedalus* (104), 1975, p. 122. See also pp 118-121.
27. For example, Vibha Tripathi, ed., *Archaeometallurgy in India* (Delhi: Sharada Publishing House, 1998), especially Vijay Kumar, "Social Implications of Technology."
28. See Greg Bailey and Ian Mabbet, *The Sociology of Early Buddhism* (Cambridge: Cambridge University Press, 2004), pp 18-21. Bailey and Mabbet, it should be said, see more of the picture than just this aspect.
29. Thapar, *op. cit*., p. 125.
30. Bailey and Mabbet, *op. cit*., p. 3.
31. Joseph Needham, *Science and Civilization in China*, vol. 2 (Cambridge: Cambridge University Press, 1962), pp 99-100, 119.
32. Spengler, *op. cit*., p. 356.

ORIGINS
A JOHN ZERZAN READER

'ORIGINS' IS THE ESSENTIAL COLLECTION OF ANARCHO-PRIMITIVIST JOHN ZERZAN'S GROUNDBREAKING WORK ON THE ROOTS OF OUR MODERN ECOLOGICAL, SOCIAL, AND PSYCHOLOGICAL CRISIS. THESE ESSAYS, SPANNING OVER THREE DECADES, HAVE SHAKEN ANARCHIST THOUGHT AND DISCUSSION TO ITS CORE, MOVING BEYOND THE STATE TO A LARGER UNDERSTANDING OF THE IMPACT CIVILIZATION HAS HAD UPON OUR LIVES AND OUR PLANET.

MESHING EMERGING PHILOSOPHY, ANTHROPOLOGY, SOCIAL AND ECOLOGICAL CRITIQUES, ZERZAN OPENS UP AN ENTIRELY NEW SET OF QUESTIONS REGARDING HOW SOCIETY WENT FROM THE UNIVERSAL EGALITARIAN GATHERER-HUNTER SOCIETIES TO THE OPPRESSIVELY DISTANCED TECHNOSPHERE. NO STONE IS LEFT UNTURNED AS OUR MOST BASIC UNDERSTANDINGS OF THE WORLD AND MEANS OF INTERACTION ARE DRAWN INTO QUESTION.

FROM SYMBOLIC THOUGHT THROUGH AGRICULTURE AND ONTO INDUSTRIALIZATION, THE QUESTIONS ASKED WITHIN DEMAND THAT WE NO LONGER REMAIN PASSIVE OBSERVERS OF OUR CREATED REALITY, AND THAT WE BREAK THE MOLD OF DOMESTICATION AND TURN AGAINST THIS CIVILIZATION THAT HAS TAKEN SO MUCH FROM US.

THIS BOOK CONTAINS ZERZAN'S MOST FUNDAMENTAL ATTACKS ON THE ROOTS OF CIVILIZATION AND ITS DEHUMANIZING IMPACTS.

JOHN ZERZAN IS AN ANARCHO-PRIMITIVIST WRITER, THINKER, AND SPEAKER. HIS BOOKS INCLUDE 'ELEMENTS OF REFUSAL', 'FUTURE PRIMITIVE', 'RUNNING ON EMPTINESS', AND 'TWILIGHT OF THE MACHINES'. ZERZAN HAS EDITED THE ANTHOLOGY 'AGAINST CIVILIZATION' AND IS AN EDITOR OF GREEN ANARCHY MAGAZINE.

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